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ABSTRACT

This report examines student mobility among California Latino adolescents. Latinos are now the largest ethnic group in the California schools; if student mobility is indeed a problem for both students and schools, it is important to understand the consequences of changing schools for Latino adolescents. Longitudinal data were studied for two samples. The first was a group of eighth graders from the National Education Longitudinal Study of 1988 who were surveyed from 1988 to 1994 (11,609 students, of whom 1,114 were from California in 1998). The second sample was 104 low-income, urban Latino seventh graders studied between 1990 and 1996. Using these data, this study examined the incidence, causes, and outcomes of student mobility, particularly during high school. Student mobility was found to be widespread in California as it is throughout the United States. In California, Latino students have mobility rates similar to those of non-Latino white students, although in the rest of the United States Latino students are more mobile than non-Latino white students. Urban Latino students are likely to transfer to other schools within the same district, and more than half of urban Latino transfers are from one comprehensive high school to another. Over half of all secondary school changes are made because of residential changes, but Latino students studied were twice as likely as white non-Latino students to change high schools for reasons other than moving. Twice as many Latino students as non-Latino white students changed schools because the students requested a change of schools. Third-generation Latino students were twice as likely to change schools as second-generation Latino students. California students who made even one nonpromotional school change between grades 8 and 12 were less likely to graduate from high school than students who remained at the same school. School dropouts were more likely to have changed schools than students who never dropped out of school. Implications for educational stakeholders are discussed, and policy

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recommendations are outlined. An appendix presents seven tables of study data. (Contains 17 tables, 10 figures, and 46 references.) (SLD)

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October 1998

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The Chicano/Latino Policy Project (CLPP) is an affiliated research program of the Institute for the Study of Social Change at the University of California, Berkeley. The CLPP supports, coordinates and develops research on public policy issues related to Latinos in the United States and serves as a component unit of a multi-campus Latino policy studies program in the University of California. CLPP's current research focus is Latino youth achievement but supports and encourages the development of research from a wide range of disciplines, including, but not limited to education, health care, immigration and political participation, and labor mobility.

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The California Policy Seminar was established in 1977 as a joint effort of the University of California and state government. The CPS applies the extensive research expertise of the UC system to the analysis, development, and implementation of state policy through a variety of activities on a wide range of topics. CPS conducts two programs–policy research and technical assistance–both of which are supported by an active dissemination effort involving publications and special briefings that feature the policy-related research of UC faculty. CPS also administers the Latina/Latino Policy Research Program. The Latina/Latino Policy Research Program was created as part of a UC Office of the President initiative on policy studies related to the state's Latino population, which was established in response to California Senate Concurrent Resolution 43.

The research presented in this report was conducted through a grant to the authors from the Latina/Latino Policy Research Grants Program administered by the California Policy Seminar (CPS) under the auspices of the UC Committee on Latino Research (UCCLR). The conclusions do not reflect those of either organization.

A summary of this report is available at http://www.ucop.edu/cps/mobility.html, or you may request the paper version of this Policy Brief by calling the CPS at (510) 643-9328.

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PREFACE

The idea for this project grew out of a previous project we began in 1990. The earlier project was a dropout-prevention study designed to develop and test promising approaches for preventing school dropouts among disabled and highest-risk youth of Mexican descent who were attending middle school in a predominantly Latino, low-income urban community in Southern California. As part of that project, we tracked the movements of a sample of middle-school students over a six-year period from grades 7 to 12. We observed that many of the students changed schools frequently, yet often remained living in the same community. Having worked closely with some of the students through the intervention study, we also knew that their mobility was often related to what went on in school, including the fact that schools actively sought to "get rid" of the highest-risk, troublesome students through transfer. After reviewing the literature on student mobility we discovered that little research had been done on this phenomenon, even though several national studies had pointed out a majority of students in the United States make non-promotional school changes sometime in their educational careers.

This interest led to our receiving a grant from the California Latino Policy Research Program to study this phenomenon with respect to the state's Latino adolescents. This report is the culmination of that effort. In affiliation with Policy Analysis of California Education (PACE) and with funding from the Stuart Foundation, we are now investigating student mobility in California among all ethnic groups.

Russell W. Rumberger
Co-Principal Investigator

Katherine A. Larson
Co-Principal Investigator

July 1998

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EXECUTIVE SUMMARY

Students in the United States are highly mobile. Previous research has shown that the majority of students in the United States change schools between grades 1 and 12 for reasons other than promotion from one level to another (e.g., elementary to middle school). Research also has found that student mobility is generally detrimental to student achievement. Despite this evidence, the issue of student mobility has not received much attention from educational researchers, practitioners, or policy makers.

In this report we examine student mobility among California Latino adolescents. Student mobility may be especially important in California because of its highly mobile population. Latinos are the largest and fastest growing segment of the state population. According to California Department of Finance estimates, the Latino public-school population is projected to triple in size between 1986 and 2006, while the non-Latino white population is projected to decrease (see Figure 1.1). Consequently, if student mobility can be problematic for both students and schools, as previous research suggests, it is especially important to understand the nature of mobility among the Latino population.

Using longitudinal data on two samples of California students—the first a group of 8th-grade students who were surveyed over a six-year period from 1988 to 1994; and the second a group of low-income, urban Latino 7th-grade students who were first studied over a six-year period from 1990 to 1996—this study examined the incidence, causes, and consequences of student mobility, particularly during high school. Throughout this study we examine differences between Latino and non-Latino white students, as well as differences among Latino students. Here we summarize some of the major findings of this study.

THE INCIDENCE OF STUDENT MOBILITY

- **Student mobility is widespread in the United States and especially in California.**

Almost two-thirds of all students in the United States made at least one non-promotional school change between grades 1 and 12. In California, almost three-quarters of all students made at least one non-promotional school change between grades 1 and 12 (Table 2.2). Among students who changed schools, most made at least two non-promotional school changes (Table 2.3).

- **In California, Latino students have mobility rates similar to non-Latino white students, whereas in the rest of the United States Latino students are more mobile than non-Latino white students.**

These differences are due to differences in non-Latino white mobility rates between California and the rest of the United States, whereas Latino mobility rates are similar nationwide. Seventy-three percent of non-Latino white students in California made non-promotional school changes between grades 1 and 12 compared to 67 percent of Latino students (Table 2.2). In the rest of the United States, 57 percent of non-Latino white students made non-promotional school changes between grades 1 and 12 compared to 68 percent of Latino students.

- **In California, Latino students appear to be less mobile than non-Latino white students between grades 1 and 8, but more mobile than non-Latino white students between grades 8 and 12.**

Between grades 1 and 8, 68 percent of Latino students changed schools compared to 73 percent for non-Latino white students (Table 2.2). Between grades 8 and 12, in contrast, 37 percent of Latino students changed schools compared to 31 percent for non-Latino white students. Although these figures suggest different mobility patterns between Latinos and non-Latino whites, the differences were not statistically significant.

- **The gap between parent and student reports of school mobility is greater among Latinos than among non-Latino whites, especially in California.**

Nationally, 19 percent of parents reported that their adolescents changed schools between grades 8 and 12, while 27 percent of students reported changing schools (Table 2.1). Interviews with students, and the experience of school practitioners, suggest that student reports of mobility, especially during high school, are more accurate than parent reports. In California, 25 percent of non-Latino white parents reported that their adolescents changed schools, compared to 31 percent of non-Latino white students, a gap of six percentage points. However, 19 percent of Latino parents reported that their adolescents changed schools, compared to 36 percent of Latino students, a gap of 17 percentage points. One explanation for this gap is that Latino parents are more likely to have low-incomes, and low-income parents are generally less involved in their adolescent's school activities.

- **Most urban Latinos transfer to other schools within the same district.**

In a longitudinal sample of Latino adolescent students attending a large urban school system in California, 81 percent of non-promotional school changes between grades 7 and 12 involved transfers to another school within the same district (Table 2.5). A similar pattern of within-district transfers was observed in a recent study of Chicago public schools.

- **More than half of urban Latino transfers are from one comprehensive high school to another comprehensive high school.**

Fifty-nine percent of the transfers of urban Latino students were to a similar school setting—a regular middle school or comprehensive high school (Table 2.5). Such transfers do not appear to provide a different or better educational experience for transfer students, and may be of questionable academic value

- **Female urban Latino students are more likely than males to transfer to nontraditional educational settings.**

Among low-income, urban Latinos, most of whom are at-risk of educational failure due to poverty and other social factors, almost half of them can be considered "highest-risk" because they exhibit poor academic and social behavior compared to their classmates. Thirty-nine percent of female highest-risk transfers and 26 percent of female at-risk transfers were to nontraditional settings, such as continuation high schools and independent study at home. In contrast, only 16 percent of male highest-risk transfers and 9 percent of male at-risk transfers were to such settings. Fourteen percent of the highest-risk males transferred to correctional facilities.

THE CAUSES OF STUDENT MOBILITY

Students change schools for many reasons. Some changes are family-related, primarily occurring when families change residence. Others are school-related, such as when students or schools initiate a transfer because of academic or social problems (e.g., poor attendance or misbehavior). We investigated the reasons students change schools and some underlying causes of student mobility.

- **Only half of all secondary school changes are made because of residential moves.**

Although residential mobility is widespread in the United States, only about half of all non-promotional school changes between grades 8 and 12 were made because of residential moves unrelated to school (Table 3.1). The other half were due to school-related reasons, usually when a student requested to change schools.

- **In California, Latino students were twice as likely as non-Latino white students to change high schools for reasons other than moving.**

Almost 50 percent of California Latino students who changed schools between grades 8 and 12 did not move, whereas only 25 percent of California non-Latino white students who changed schools between grades 8 and 12 did not move (Table 3.2). For both Latinos and non-Latino whites, changing residences increased the odds of changing schools between grades 8 and 12, but more so for non-Latino whites than for Latinos. Non-Latino white students who moved were five times more likely to change schools as non-Latino white students who did not move, after controlling for the effects of socioeconomic status and other family characteristics (Figure 3.1). But Latino students who moved were only twice as likely to change schools as Latino students who did not move.

- **Three times as many California students changed high schools because of disciplinary problems as students in other states.**

Seventeen percent of parents in California reported that their adolescent changed schools between grades 8 and 12 for disciplinary reasons compared to 5 percent of parents in other states (Table 3.1).

- **In California, disciplinary problems predicted school mobility among Latino students but not among non-Latino white students.**

California Latino students who misbehaved in 8th grade were 58 percent more likely to change high schools as California Latinos who did not misbehave. In contrast, misbehavior did not predict school changes for non-Latino white students (Figure 3.2). These results support the notion that nonacademic factors play a role in school mobility, especially for Latino students. It also raises questions about whether schools respond differently to Latino and non-Latino white students who have disciplinary problems.

- **Almost twice as many Latino students as non-Latino white students in California changed schools because the student requested a change of schools.**

Sixty-one percent of Latino parents reported that their adolescents changed schools because they requested a change, compared to 38 percent of non-Latino white parents (Table 3.1). This suggests that more Latino secondary students than non-Latino white students are assuming the responsibility of changing schools. Given that changing schools increases the odds of dropping out, it is problematic that Latino adolescents appear to be making such an important decision independently.

- **In California, second-generation Latino students were half as likely to change schools as third-generation Latino students.**

Even after controlling for the effects of family structure and socioeconomic status, second-generation Latino students were only half as likely to change schools as third-generation Latino students (Figure 3.1). This result is consistent with numerous studies that have found second-generation students are generally more successful in school and have lower dropout rates than third-generation Latino students. These findings raise questions about the acculturation process among Latino immigrant families and their students.

- **Students who change schools in elementary school are more likely to change schools in secondary school.**

Both Latino and non-Latino white students who changed schools between grades 1 and 8 were 20 percent more likely to change schools between grades 8 and 12 than students who did not change schools between grades 1 and 8, even after controlling for differences in socioeconomic status and other background factors (Figure 3.1).

THE EDUCATIONAL CONSEQUENCES OF STUDENT MOBILITY

Previous research has found that student mobility has detrimental impacts on student achievement. In this study we investigated the impact of student mobility on one specific educational consequence: completing high school. Although high-school completion represents only one aspect of educational achievement, it is a particularly important one. High school completion is the gateway to higher education. For students who do not go on to higher education, research has shown that *completing* high school has a stronger impact on subsequent labor market earnings than what is learned (academic achievement) in high school.

- **California students who made even one non-promotional school change between grades 8 and 12 were less likely to graduate from high school than students who remained at the same school.**

Among California Latino adolescents, 89 percent of those who made no school changes graduated from high school, compared to 63 percent who made one school change and 60 percent who made two or more (Table 4.1). Among California non-Latino white adolescents, 96 percent of those who made no school changes graduated from high school, compared to 83 percent who made one school change and 62 percent who made two or more (Table 4.1). This suggests that for Latino students there was less benefit from changing high schools than for non-Latino white students. Benefits from changing schools were even less likely for urban Latino students. Among Latino student adolescents, 65 percent who did not change schools between grades 7 and 12 graduated from high school, compared to only 30 percent of the students who made one or two non-promotional

school changes (Table 4.2). Thus not only were low-income, urban Latinos less likely to graduate from high school compared to Latino students statewide, mobility had a greater adverse affect on their chances of finishing high school.

- **School dropouts were more likely to have changed schools than students who never dropped out of school.**

Among both Latinos and non-Latino whites, the majority of school dropouts had changed schools at least once between grades 8 and 12, while the majority of non-dropouts did not change schools (Table 4.3). Among Latino dropouts in these grades, more than 40 percent changed schools only one time before quitting school, and only 10 percent changed schools three times or more times. Among non-Latino white dropouts, in contrast, only 22 percent changed schools one time before quitting school, while more than 25 percent changed schools three or more times. These data suggest that most dropouts don't simply quit one secondary school, but try at least one other school. Non-Latino white students are more than twice as likely as Latino students to try several schools before dropping out.

IMPLICATIONS

Our findings—that student mobility is widespread and adversely affects students' chances of completing high school—have important implications for all educational stakeholders: state policy makers, local school officials (district administrators, principals, and teachers), and students and parents. Each of these stakeholders is affected by student mobility, and each can play a role in responding to it.

> Responses can serve two purposes. One is to reduce the incidence of at least some types of mobility—mobility that is unnecessary and not educationally productive. The other is to mitigate the potentially harmful impacts. Appropriate responses depend on the type of, or reason behind, mobility. In order to formulate appropriate policy responses it is important to distinguish between three types of mobility: (1) family-related; (2) school-related, voluntary; and (3) school-related, involuntary.

Family-related mobility is when families change residences: families move from one area of the country to another, perhaps to find a better job. This kind of mobility is not preventable—changing residences requires changing schools. The appropriate response is to better prepare for and respond to the change, to smooth transitions to new schools. Schools might, for example, provide an orientation program for new, incoming students by matching them with students who can show them around and provide academic as well as social support.

School-related mobility, on the other hand, is more preventable. Most Latino parents who report that their adolescents changed high schools say that their adolescents requested the change. These are voluntary school changes initiated by students. Based on our study of urban Latinos, these changes are not made for academic reasons, and are usually a change to another comprehensive high school rather than to a magnet or other specialized high school. These types of school changes are preventable—that is, if schools were more responsive to students and parents, these changes could be reduced or prevented. Appropriate responses to preventable school moves might include increasing student engagement—both socially and academically—and using various strategies (such as orientation programs) to minimize negative impacts.

More than a third of Latino parents report that the school initiated the change because of academic or disciplinary problems. These school changes are basically involuntary. In order to promote school safety, California schools have been given increased latitude to expel or transfer difficult or misbehaving students. Several case studies also have documented a school practice of coercing difficult students to leave voluntarily. Disciplinary school changes are problematic, because they are being used for Latino students more than for non-Latino white students, which raises questions about the evenhandedness of such practices. Involuntary school changes might require yet a different response, such as investigating schools that have high rates of mobility to examine whether these schools are discharging large numbers of students, rather than accommodating student needs.

POLICY CONSIDERATIONS

To prevent some kinds of student mobility and to mitigate the potentially harmful effects of all mobility, educational stakeholders could initiate a variety of appropriate responses. In this report, we identify possible responses that could be initiated by state policy makers. We call these "Policy Considerations" because we have not analyzed the costs or political feasibility of implementing them. After considering these constraints, however, we believe that useful and effective responses could be undertaken by appropriate state officials through legislation or through Department of Education mandates and directives. To provide information on the extent of student mobility in California and to begin to address what we see as a serious yet unrecognized educational problem, we believe state policy makers should consider:

1. **Requiring schools to report mobility rates to the Department of Education. For example, schools could be required to report the proportion of students who leave a school (say a minimum of 15 days) before the end of the year, as well as the proportion of new students who enter after the start of the year.**

One reason so little is known about student mobility in California is that the state does not collect relevant data. Schools could easily provide counts of students who leave school before completing the year, because they routinely collect and report related information through the California Basic Education Data System (CBEDS). Since schools must now report dropouts, they could also report students who transfer.

2. **Including attrition rates as a measure of school effectiveness in school accountability reports.**

The Department of Education periodically issues school accountability report cards, which are designed to measure the effectiveness of schools. School mobility rates should be included as a measure of school effectiveness because they reflect, in part, the "holding power" of schools—their ability to retain and educate students who walk in the door. As with all measures of school effectiveness, a school's demographic characteristics, which can contribute to school mobility rates, should be taken into account.

3. **Holding school districts accountable to monitor the whereabouts of students who leave a school early, particularly students who say they are transferring to another school within the district, to ensure that students actually enroll in another school in a timely manner.**

Student mobility is a problem, in part, because students who change schools are not monitored between leaving one school and entering another, even within the same district. . Currently, no one is accountable for these students during this transition. Our data show that several weeks often elapse before secondary students re-enroll: This must change to avoid an unnecessary interruption in a student's schooling. Because school districts are legally responsible for the educational welfare of their students, and because most transfers occur within districts, school districts should be accountable to the state for minimizing the transition time.

4. **Requiring school districts to transmit student records to the new school in a timely manner.**

One frequent problem is that student records are not promptly delivered to the new school. Without these records, personnel at the new school cannot know a student's educational history and what services he or she may need. Data on urban Latino students show that 80 percent of non-promotional school changes are within the same district, so record transfers should be easily done.

5. **Having the state Department of Education prepare a guidebook for students and parents that describes the advantages and disadvantages of changing schools, and provides information on how to prepare for the move and ease the transition into a new school.**

Some mobility could be prevented if students and parents were better informed about the risks and rewards of changing schools. Latino parents particularly need information about the risks for their child in requesting a school change, because Latino students request such changes more often than non-Latino white students. Transitions to new schools could be improved if students and parents knew how to facilitate the move.

6. **Having the Department of Education prepare a guidebook for school districts with actions they can take to reduce unnecessary transfers and to respond to the particular needs of transfer students.**

Some schools actively encourage student transfers without considering the educational consequences. Schools may also do little to help integrate transfer students and improve their prospects for academic success. But some schools, both in California and elsewhere in the United States, have established interventions for transfer students including orientation and "buddy" programs to help them adjust more quickly and successfully to their new schools. The Department of Education could evaluate the effectiveness of these programs and provide information about them throughout the state.

7. **Providing funds to schools to establish programs to improve the academic and social integration of new students in a school.**

The Department of Education could also provide grants to schools to develop, implement, and evaluate "newcomer" programs in middle and high school.

Chapter 1

INTRODUCTION

Students in the United States change schools frequently. School changes usually occur when students are promoted from one type of school to another, such as from elementary school to middle school or from middle school to high school. Other changes, however, involve moving from one school to another for reasons other than promotion. Data from several national studies have shown that most students in the United States make such unscheduled or non-promotional school changes. One national longitudinal survey of U.S. 8th graders tracked from 1988 through 1994 found that 31 percent made two or more non-promotional school changes between grades 1 and 8, and 10 percent made two or more such changes between grades 8 and 12. (Smith, 1995: Indicator 46). A recent national study found that more than 40 percent of all 3rd graders had made unscheduled school changes at least once since 1st grade, and 17 percent had changed schools two or more times (U.S. General Accounting Office, 1994). In both studies, the incidence of non-promotional school changes was higher among Latino, black, Native American, and low-income children than among white, Asian, and middle- to high-income children .

The practice of making non-promotional school changes, referred to as *student mobility,* not only varies widely among students, but also among schools. It is especially high in large, predominantly minority, urban school districts. A survey of more than 50 local education agencies throughout the United States revealed that in many districts, the proportion of students enrolled in a school for less than the entire academic year often exceeds 30 or 40 percent (Ligon and Paredes, 1992). In the Los Angeles Unified School District, for example, the turnover rate (the proportion of students who entered after school started or left before school ended) across the district exceeded 40 percent in the 1990-91 school year (Los Angeles Unified School District, 1991). Another recent study found that in three California school districts, yearly turnover rates in most schools exceeded 50 percent (McDonnell and Hill, 1993).

Despite the high incidence of student mobility, this issue has not received much attention from educational researchers, practitioners, or policy makers. One reason is because student mobility is often seen as an inevitable result of family relocation or residential mobility, about which schools can do little. Indeed, residential mobility in the United States is, generally higher than in other Western countries and Japan (Long, 1992). A recent survey of American children found that 75 percent of all school-age children in the United States moved at least once before they were 18 years old, and 10 percent moved six times or more (Simpson and Fowler, 1994; Wood et al., 1993). An earlier study by the U.S. Census Bureau found that in 1987, one-fifth of all school-age children in the United States moved over a 1-year period. (U.S. Bureau of the Census, 1987).

Some scholars, however, have argued that student mobility is also related to what goes on within schools (Fine, 1991; Bowditch, 1993; Wehlage and Rutter, 1986). In fact, a national study of high-school students found that 40 percent of the reasons students gave for transferring schools were not related to moving (Lee and Burkam, 1992). Another study showed that 40 percent of elementary students who transferred schools in Chicago between 1992 and 1993 did not change residences (Kerbow, 1996). Two recent case studies of urban high schools documented that school changes were the result of school officials' attempts to "get rid of troublemakers" by forcing them, sometimes illegally, to leave (Fine, 1991; Bowditch, 1993). Taken together, this research shows that schools are at least partly responsible for high student turnover.

One reason educators and policy makers should be concerned with student mobility is that several studies have found that mobility is detrimental to student achievement at both the elementary

and secondary levels. At the elementary level, students experience both social and academic adjustment problems that affect their academic achievement, with older students more likely to develop problems than young ones (e.g., Benson et al., 1979; Crocket et al., 1989; Holland, Kaplan, and Davis, 1974; Jason et al., 1992; Tucker, Marx, and Long, 1998; U.S. General Accounting Office, 1994). At the secondary level, many studies confirmed that mobile students are less likely to complete high school than stable students (Astone and McLanahan, 1994; Haveman and Wolfe, 1994; Hess and Lauber, 1985). Two additional studies examined differences among high-school students who remained in school, transferred, or dropped out (Lee and Burkam, 1992; Rumberger and Larson, in press). Both studies found that student engagement—as reflected in test scores, homework, and absenteeism—was related to mobility and to dropping out: The most-engaged students remained in school and graduated, the least engaged dropped out, and those in-between transferred to another school.

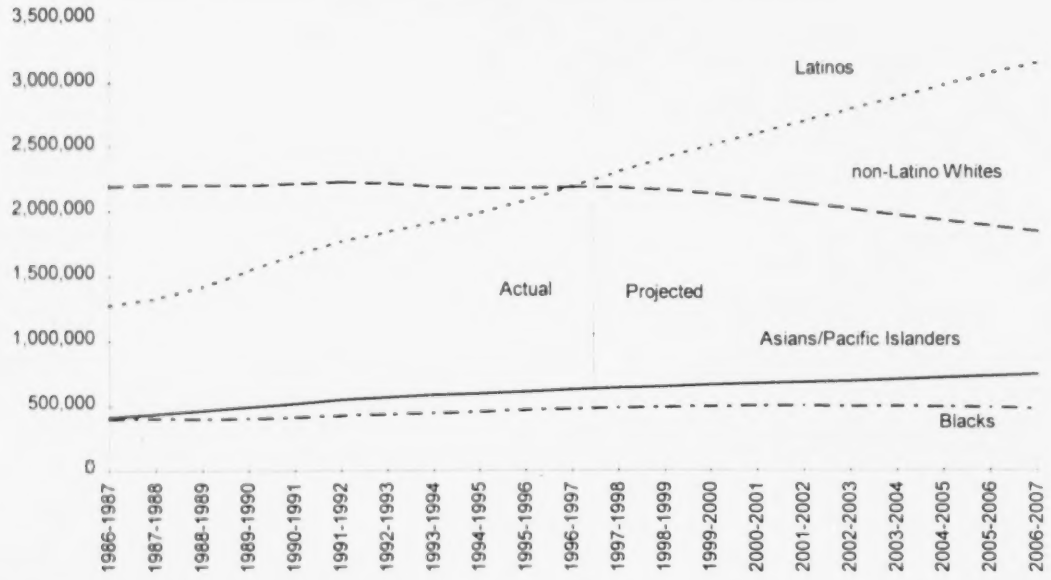
- Previous research has shown that school mobility is associated with low student achievement; yet, the apparent detrimental effects may not be due to mobility itself, but to factors that contribute to both student mobility and achievement. For example, because low-income children are more likely to be mobile and have problems in school, perhaps both their mobility and low achievement are caused by family problems related to poverty. Indeed, one recent study in Chicago found that half of the achievement differences between mobile and stable students could be attributed to differences between students that predated school changes, although at least half appear to be related to the impacts of mobility (Temple and Reynolds, 1997). Other research confirms that even after controlling for differences in poverty, socioeconomic status, and other background factors, students who change schools experience lower academic achievement than those who do not (Jason, et al., 1992; McMillen, Kaufman, and Klein, 1997; Rumberger, 1995; Rumberger and Larson, in press; Wood et al., 1993).

THE PRESENT STUDY

In the present study we examined the issue of student mobility in California, which may be especially important because of the state's highly mobile population. Many residents have moved to California from other states or countries. In 1990, one-third of all foreign-born Americans resided in California (Rumbaut, 1995).

This study focuses on California's Latino population, as the largest ethnic group in the state's public schools (see Figure 1.1). According to Department of Finance estimates, the state's Latino public-school population is projected to triple between 1986 and 2006, while the non-Latino white population is projected to decrease slightly over the same period. If student mobility is problematic for both students and schools, it is particularly necessary to understand the nature of mobility among the Latino population.

Figure 1.1 California K-12 Enrollment by Major Ethnic Groups, 1986-2006



SOURCE: California State Department of Finance, "K12 Graded Public School Enrollment by Ethnicity, History and Projections— 1997 Series."

RESEARCH QUESTIONS

We examined the incidence, causes, and consequences of student mobility among Latino youth in California, addressing the following questions:

1. What is the incidence of mobility among Latino students in California and how does it compare to non-Latino whites?
2. What are the causes of student mobility? To what extent do individual, family, and school factors explain student mobility?
3. What are the educational consequences of student mobility?
4. What are the implications of this research for state education policy?

We answered the first three research questions by comparing Latino students to non-Latino white students, and then examining differences among subgroups of Latino students. As others have pointed out, the Latino population has very heterogeneous demographic characteristics, such as immigration status and socioeconomic status, which in turn contribute to differences in students' educational experiences (Matute-Bianchi, 1986; Rumbaut, 1995; Valencia, 1991). We investigated how their differences contribute to the causes and consequences of mobility among Latinos.

We also examined differences in mobility and its impacts among Latinos based on their "educational risk." In our previous work, we have found differences between the educational experiences of "high-risk" Latino students—those with the most troublesome classroom behavior and the worst school performance—and "at-risk" Latino students—those with better classroom behavior and school performance, but who are still at risk because of low income and low parental educational levels (Larson and Rumberger, 1995).

RESEARCH METHODS

In the present study we used two sources of longitudinal data and multiple analytic techniques to study student mobility among Latinos in California. The two sets of data focus on different groups of Latino students, which allowed us to investigate differences among subgroups. We employed both statistical analysis and qualitative analysis to get a more detailed picture of student mobility.

Data and Samples

The first set of data used in this study is the National Education Longitudinal Survey of 1988 (NELS), a national longitudinal panel study of a cohort of 8th graders begun in 1988 and continued until 1994 (Carroll, 1996). The NELS data are particularly suited to study mobility because they contain extensive information about the educational background and achievement of students over time, including information on school mobility between grades 1 and 8, and on both school and residential mobility between grades 8 and 12. It is also possible to examine the impact of mobility on high-school graduation, because students were last surveyed in 1994, two years after the expected time of high-school completion in 1992.

NELS base-year data were collected in 1988 and follow-up data were collected in 1990, 1992, and 1994 on a subset of the original base-year respondents. Members of the follow-up sample were tracked whether they remained in school or dropped out, as long as they continued to reside in the United States. To compensate for differences in the probability of selection and in response rates, sample weights were imputed for members of this panel in order to provide an accurate population estimate of the approximately 3 million 8th graders in 1988.[1] The data used in this study consisted of 11,609 students who were interviewed in all four survey years and had valid information on school mobility in 1992, including 1,114 students who attended school in California in 1988— 346 of whom were Latino and 443 of whom were non-Latino white. Based on comparisons with official school enrollment figures, it appears that the ethnic distribution of the weighted sample of California respondents was similar to the actual ethnic distribution of 8th-grade students enrolled in the 1987-88 school year (see Appendix Table A.1).

The second source of data comes from an on-going study of Latino middle-school students conducted by the authors in a Los Angeles community. The community is 83 percent Latino, has a per capita income half that of Los Angeles County and the state, and 75 percent of its members do not speak English at home (Larson and Rumberger, 1995). We selected this community because it is representative of the low-income, highly segregated urban communities in which many Latino families live. Most Latinos in this community, and in the study, are Mexican American; they represent two-thirds of the Latino population in California and are generally more disadvantaged than other Latinos (Macias, 1993; Valencia, 1991). This on-going project examines a host of family, community, and school factors and how they affect the educational achievement of Latino students, who are distinguished by two characteristics: whether or not they are limited-English-proficient (LEP), and whether they are "at-risk" (students who, by virtue of their poverty and urban status, are at risk of school failure) or "high-risk" (students identified by their sixth grade teachers as being more difficult to teach and having more problematic classroom behaviors relative to their classmates).[2] It is built on the premise that the Latino population is heterogeneous, and only by understanding and addressing the problems facing different types of Latino students can schools and the state hope to improve the welfare of all Latinos in California.

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1 The base-year cohort excluded about 5 percent of the 8th-grade population who were deemed ineligible to participate due to insufficient English language proficiency or a handicap. A sample of students from this "base-year ineligible" population was added back into the NELS cohort in 1990, but were excluded from the present study because they lacked data from the base-year (1988). We discuss this limitation later in this section.

2 A detailed explanation of how we identified high-risk and at-risk students can be found in Larson and Rumberger (1995).

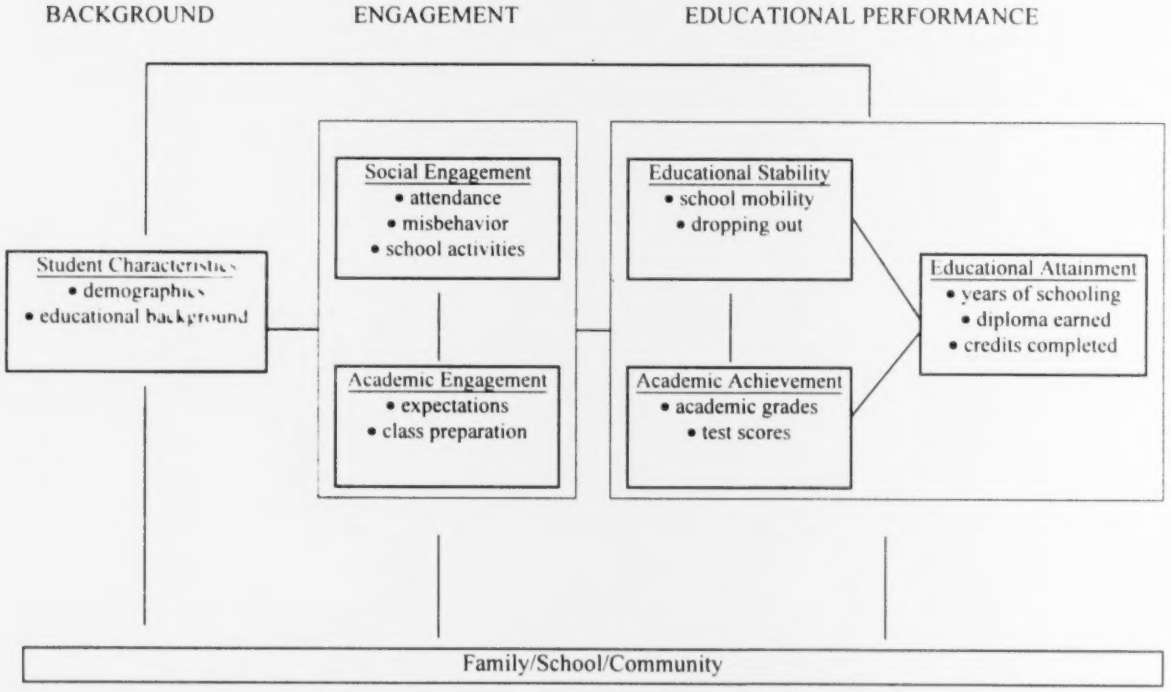
In the present study we examine the mobility and educational experiences of 104 Latino students who started 7th grade in one middle school in 1990 and were tracked until 1996, when they should have graduated from high school. We refer to this data as the California Urban Latino Sample (CULS) sample. Although the CULS sample is small and confined to one urban community, it provides a more detailed and richer source of data than the NELS study. For example, in the CULS sample we could track and individually interview students, getting a more complete picture of student mobility than is possible from a large-scale national survey.

Conceptual Framework

To conduct the present study we developed a conceptual framework based on the existing theoretical and empirical research reviewed above. The framework is shown in Figure 1.2.

This framework posits that school mobility is one aspect of educational stability that influences both academic achievement and educational attainment. Students who are educationally stable remain enrolled until completing high school and typically attend one elementary school, one middle or junior high school, and one senior high school. Students can interrupt their schooling either by changing schools or changing their enrollment status (i.e., quitting school or dropping out). Some school changes may be beneficial—if, for instance, students move from a poor school to a better one. But other school changes may be detrimental—such as when students change schools because they cannot get along with other students or teachers, and those problems continue to exist at the new school. An important empirical question about mobility that we examined in this study is: how are school changes beneficial or detrimental to student achievement?

Figure 1.2 Conceptual Framework for Studying School Mobility



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The conceptual framework also posits that both educational stability and academic achievement are influenced by students' engagement in school. Based on the work of Tinto (1987) and Wehlage and associates (1989), the framework distinguishes between two types of engagement: academic engagement, or engagement in learning; and social engagement, or engagement in the social aspects of school. Tinto and Wehlage suggest that both types of engagement are important to keep students enrolled in school. Based on the work of Finn (1989), the framework further posits that engagement will be reflected both in students' attitudes and their behaviors. Finally, the framework suggests that student stability is both a cause and a consequence of engagement in school.

Analytic Methods

We used both quantitative and qualitative analytic techniques to conduct this study. Two quantitative techniques were used to analyze the NELS and the CULS data. First, we used descriptive statistics to compare students with respect to the incidence, causes, and consequences of student mobility. NELS data were used to compare Latino and non-Latino white students in California and in the rest of the United States.[3] Because the descriptive statistics were based on non-random samples, we computed margins of errors for estimated percentages for the various samples used in the study. These are provided in Appendix Table A.2. The margins of error allow the reader to determine whether differences between any two groups are statistically significant. CULS data were used to compare high-risk and at-risk Latino students. Second, two multivariate statistical models were tested using the NELS data, one to predict whether students changed schools between 1988 and 1992 and the other to predict whether students completed high school by 1994.[4] The models incorporated a series of variables based on the conceptual framework described above. The variables are described in detail in Appendix Table A.3.

Two qualitative techniques were also used. First, we constructed some profiles of student mobility based on information we have gathered over the six years of tracking the CULS students. Second, we conducted a series of in-depth interviews with two of the students who, based on their school records, had changed schools many times since 7th grade. In these interviews we heard in detail the educational and personal experiences of these two students, and learned about the reasons they changed schools and the educational consequences. These interviews provided a rich understanding of student mobility and its relation to other student experiences.

Limitations

There are several limitations to this study, specifically concerning the data that were used. There are two potential limitations with the NELS data. One is how well the NELS sample represents California students, because the NELS and sample weights were designed to be representative of the entire nation, not necessarily of the states where the respondents lived. But since California is a large state, the California NELS sample is fairly large— about 10 percent of the total NELS sample. A more serious representation problem might be that the NELS study excluded students who were unable to fill out a questionnaire in English during the first year (base year) of the study. As a result, limited-English-proficient (LEP) students are underrepresented in the California NELS sample. If mobility rates among LEP students were higher than other Latino students, the results could underreport student mobility among California Latinos. To investigate this, we compared the reported mobility rates for these so-called base-year-ineligible Latino students (who were brought back into the NELS study in 1990, but who are excluded from the present study because they lacked base-year

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3 Due to the small size of the California sample, it was not possible to break down the comparisons into smaller subgroups, such as between immigrants and non-immigrants. But these relationships were investigated in the multivariate analysis.

4 As suggested by NCES (Ingles, Scott, Lindmark, Frankel, and Myers, 1992, p. 48), we created design effect-adjusted weights and used them to estimate the logistic regression models and accurate tests of statistical significance.

information) with the NELS Latino students in our study. We found that the excluded base-year students did report higher rates of mobility than the base-year students included in our study, although the differences were not statistically significant due to the small number of California base-year-ineligible students (n = 61). Thus this portion of our analysis probably understates the extent of mobility among Latino students.

A second potential limitation of the NELS data concerns attrition from the NELS panel. The NELS study tracked only about 60 percent of the base-year respondents over the entire six years of the study. In addition, some respondents did not have complete data from all four survey years. This raises the question of whether attrition may have resulted in a biased sample of students, especially considering that mobile students—the subject of this study—may have been more likely to leave the NELS study. To investigate this issue, we compared the sample of California respondents in this study with the sample of base-year California respondents who were not included on a number of 8th-grade family and student background measures.[5] We found there were no significant differences in socioeconomic status and parental education between the two samples, but there were significant differences in family structure, student achievement, and elementary school mobility. However, student weights for respondents retained in the longitudinal panel were readjusted to reflect differential response rates, which reduced the apparent bias in the samples.[6]

The CULS data also had limitations. The sample was drawn from only one school in the state, so they also may not be representative of the entire Latino population. But a comparison with California enrollment figures shows that the middle school where the sample was drawn has the same proportion of LEP students as the state as a whole (Larson and Rumberger, 1995). As we stated earlier, the sample school was selected to be representative of the low-income urban communities where many Latino families live. The strength of the CULS data is that it provides detailed information available from school records, which allowed us to identify all students' movements in and out of school (educational stability) and between schools (Los Angeles Unified School District, 1991) with more precision than is possible with NELS or other survey data. The CULS students were tracked no matter where they went, except those who moved back to Mexico. Finally, the sample data provided detailed educational histories of two highly mobile students, although they may not be representative of all mobile Latino students.

Finally, this study focuses on Latinos and comparisons with non-Latino whites. It would also be interesting to see how the experiences of Latinos compare with other ethnic minority groups in California, such as Asians. We are currently investigating student mobility among other ethnic groups as part of another study that will be published by Policy Analysis for California Education (PACE) in 1999.

REPORT ORGANIZATION

In the remainder of this report we present our research findings and discuss their implications. In Chapter 2 we compare the incidence of student mobility between Latinos and non-Latino whites and between high-risk and at-risk Latino students. We also introduce detailed mobility profiles of the two highly mobile Latino students. In Chapter 3 we analyze the causes of student mobility at the secondary level for both Latino and non-Latino white students and examine various reasons for the two students' high incidence of mobility. In Chapter 4 we analyze the consequences of student mobility for Latino and non-Latino white students, and for high-risk and at-risk Latino students. Finally, in Chapter 5 we discuss the implications of the findings for educational policy and practice.

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5 Theses comparisons were based on base-year student weights adjusted for design effects.

6 For example, 39 percent of the retained California students reported no elementary school mobility between grades 1 and 8, compared to 29 percent of the excluded California students based on the base-year sample weight. However, 35 percent of the retained California students reported no elementary school mobility based on the longitudinal panel weight.

Chapter 2

THE INCIDENCE OF STUDENT MOBILITY

In this chapter we examine the incidence of student mobility in California, focusing on Latino and non-Latino white students. We begin by discussing the definition and measurement of student mobility. Then we estimate the overall incidence of student mobility based on NELS data from the 1988 8th-grade cohort over the four-year period from 1988 to 1992. We compare the experiences of California students with students in other states and we compare the experiences of Latino students with the experiences of non-Latino white students. We also use the CULS data to examine the effects of student mobility on a sample of low-income urban Latinos, and compare the experiences of the highest-risk Latinos with the experiences of more typical at-risk Latinos. We then examine the student mobility patterns of two Los Angeles Latino students.

MEASURING THE INCIDENCE OF STUDENT MOBILITY

In the existing literature, the term *student mobility* refers to students who move from one school to another. In some cases this means a scheduled promotional transfer from one school level to another. For example, students who attend an elementary school from kindergarten to grade 6 will typically enroll in a middle school for grades 7 and 8 or grades 7 to 9. After graduating from middle school, the students then attend a senior high school for grades 9 to 12 or grades 10 to 12, depending on how the schools are configured. Although scheduled, promotional school changes also can be problematic for students (Hirsch and Rapkin, 1987), in this study we focus on unscheduled or non-promotional school changes. Specifically, we define student mobility (and the term *school mobility*, which we use interchangeably) as school changes other than those due to promotion from one school level to another, such as occurs when a student enrolls in the first grade level of a school and then transfers to another school before graduating or completing that school.

Information on student mobility generally comes from two sources. One source is from schools, which typically monitor the enrollment patterns of their students, in part to help identify students who drop out or transfer in and out of their schools. Schools, however, cannot easily tell whether students who leave school early actually transfer or simply drop out (Hammack, 1986).

Other data on student mobility come from surveys of parents and students. In surveys, students and parents can report how often they change residences and schools. Such questions were included in the NELS surveys. In the 8th grade survey (1988), parents were asked to identify how many times their children changed schools between grades 1 and 8, excluding changes due to promotion. In the 12th-grade survey (1992), parents again were asked how many times their adolescents changed schools between grades 8 and 12. In the same survey, students and dropouts were also asked how many times they had changed schools over the previous four years.

In Table 2.1 we compare parent and student reports of school changes between grades 8 and 12. As the data show, students (and dropouts) reported more school mobility than parents. Nationally, 19 percent of parents reported that their adolescents had changed schools between grades 8 and 12, while 27 percent of students reported changing schools. We attribute these differences to some parents not being fully aware of the educational experiences of their adolescents, especially students

enrolled in high school. This interpretation is supported by the interviews we conducted with two CULS students who recounted their school moves more completely than their parents.[7]

Table 2.1 Number of Non-promotional School Changes from Grades 8 to 12 Reported by Parents and Students, by California Residency for Latinos and Non-Latino Whites (percentage distribution)

	California			Other States			Total
	Latinos	Non-Latino Whites	All Students	Latinos	Non-Latino Whites	All Students	
Parent-Reported							
0	81	75	78	81	83	82	81
1	11	15	13	12	12	12	12
2	3	5	4	6	3	3	4
3 or more	5	5	5	1	3	3	3
Student-Reported							
0	64	69	66	69	77	74	73
1	24	18	22	19	15	17	17
2	7	7	6	8	5	6	6
3 or more	6	6	6	4	3	3	3
Total	100	100	100	100	100	100	100

NOTE: Parent responses based on data from 12th-grade parent questionnaire. Student responses based on data from 12th-grade student questionnaire. School changes excluding those due to promotion from elementary to middle school and from middle school to high school.

SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

The gap between parent and student reports of school mobility is generally greater among Latinos than among non-Latino whites, especially in California. In California, 25 percent of non-Latino white parents reported that their adolescents changed schools, compared to 31 percent of non-Latino white students, a gap of six percentage points that is not statistically significant. However, 19 percent of Latino parents reported that their adolescents changed schools, compared to 36 percent of Latino students, a statistically significant gap of 17 percentage points. Whether the gap between Latino parents' and their adolescents' reports of mobility is due to effects of low-income or cultural differences is unclear, but it does suggest than Latino parents are less aware of their children's' school activities than non-Latino white parents (see, for example, Delgado-Gaitan, 1991; Valdez, 1996). Based on this information, we conclude that students are more knowledgeable than parents are about their school changes during secondary school. Therefore, in the remainder of this study we rely on student reports of mobility between grades 8 and 12.

7 We confirmed the reports of these two students with actual school records and found the student reports were completely accurate. This interpretation was supported by our experiences in working with other students from the same school as part on a six-year dropout prevention study (see Larson and Rumberger, 1995).

8 We confirmed the reports of these two students with actual school records and found the student reports were completely accurate. This interpretation was supported by our experiences in working with other students from the same school as part on a six-year dropout prevention study (see Larson and Rumberger, 1995).

MOBILITY REPORTED BY THE 1988 8TH-GRADE COHORT

The NELS data provides a picture of student mobility as reported by one cohort of students—those enrolled in the 8th grade in 1988—over their entire elementary and secondary careers. The number of non-promotional school changes reported by the 1988 8th-grade cohort is shown in Table 2.2. In the United States overall, more than 50 percent of all students had changed schools at least once between grades 1 and 8, and 20 percent had changed schools three or more times over this seven-year period. At the secondary level, more than 25 percent of all students changed schools at least once between grades 8 and 12. These figures confirm the common perception that American students are highly mobile: During the 12 years of elementary and secondary school, more than 60 percent of students made at least one non-promotional school change.

Table 2.2 Number of Non-promotional School Changes by Grade Level and California Residency for Latinos and Non-Latino Whites (percentage distribution)

	California			Other States			Total
	Latinos	Non-Latino Whites	All Students	Latinos	Non-Latino Whites	All Students	
Grades 1-8							
0	42	37	35	43	50	47	46
1	26	23	26	24	23	23	23
2	12	12	12	11	9	10	10
3 or more	20	28	26	21	19	20	20
Grades 8-12							
0	64	69	66	69	77	74	73
1	24	18	22	19	15	17	17
2	7	7	6	8	5	6	6
3 or more	6	6	6	4	3	3	3
Total Grades 1-12							
0	33	28	27	32	43	40	39
1	27	26	25	25	22	22	22
2	11	14	15	15	12	12	13
3 or more	29	33	33	28	23	26	26
Total	100	100	100	100	100	100	100

NOTE: School changes from grades 1 to 8 based on data from 8th-grade parent questionnaire. School changes from grades 8 to12 based on data from 12th-grade student questionnaire. School changes excluding those due to promotion from elementary to middle school and from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

The figures also show that the California students were more mobile than students in the rest of the nation. Sixty-five percent of California students changed schools between grades 1 and 8, compared to 53 percent of students in other states. More than 26 percent of California students changed schools three or more times, compared to less than 20 percent of students in the rest of the nation. At

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the secondary level, 34 percent of California students reported changing schools between grades 8 and 12, compared to 26 percent in other states. All of these differences are statistically significant.[9]

The estimated incidence of mobility varies between Latinos and non-Latino whites, although the differences are not statistically significant. At the elementary level, Latino students appear to be less mobile than non-Latino white students in California, but are more mobile than non-Latino white students in other states. For example, more than 25 percent of non-Latino white students in California changed schools three or more times between grades 1 and 8, compared to less than 20 percent of Latino students. At the secondary level, however, Latino students in California—and in other states—were more mobile than non-Latino white students.

The fact that Latino elementary students in California may be less mobile or at least no more mobile than non-Latino white students is particularly surprising, given that a much greater proportion of Latinos than non-Latino whites in California are immigrants (see Appendix Table A.4). But recent research shows that Latino immigrants in California, who are generally poor and of Mexican decent, are more likely to settle into predominantly low-income, Latino communities close to extended family members, where there are few opportunities or reasons to relocate (Portes and Rumbaut, 1990).

To calculate how many school changes are made by students who do change schools, we analyzed the number of non-promotional school changes only among respondents (8th-grade parents and students in 12th grade) who reported making school changes. The results are shown in Table 2.3.

Table 2.3 Number of School Changes by Grade Level and California Residence for Mobile Latinos and Non-Latino Whites (percentage distribution)

	California			Other States			Total
	Latinos	Non-Latino Whites	All Students	Latinos	Non-Latino Whites	All Students	
Grades 1-8							
1	44	37	41	42	45	44	44
2	21	19	19	20	18	19	19
3 or more	34	45	41	38	37	37	38
Grades 8-12							
1	66	58	64	60	66	65	65
2	19	22	18	27	21	23	23
3 or more	15	20	19	13	13	12	13
Total Grades 1-12							
1	41	35	35	38	38	37	37
2	16	20	20	21	21	21	21
3 or more	43	45	45	41	41	43	43
Total	100	100	100	100	100	100	100

NOTE: School changes from grades 1 to 8 based on data from 8th-grade parent questionnaire. School changes from grades 8 to 12 based on data from 12th-grade student questionnaire. School changes excluding those due to promotion from elementary to middle school and from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

9 As discussed in Chapter 1, statistically significant differences in reported percentages can be computed from the margin of errors in Appendix Table A.2. For example, the 12 percentage point difference in mobility rates between California and non-California students (65 versus 53 percent) is greater than the combined margin of errors of five percentage points shown in Appendix Table A.2 (four percentage points for the California estimate and one percentage point for the non-California estimate), which leads us to conclude that the difference is statistically significant.

At the elementary level, the majority of mobile students make two or more non-promotional school changes over the seven-year period between grades 1 and 8. In fact, more than a third make three or more non-promotional school changes over this period. These patterns are similar between California and non-California residents. Among California students, non-Latino whites appear to make more multiple school changes at the elementary level than Latinos, although the differences are not statistically significant. The higher rates of non-Latino white school mobility could be due to non-Latino whites experiencing continued upward economic mobility and more frequent residential changes (which we document in the next chapter).

At the secondary school level, about two-thirds of all mobile students only make one non-promotional school change over the four-year period between grades 8 and 12. Another 25 percent make two school changes and only one out of every eight mobile students changes schools three or more times during this period. Again these patterns are similar between California and non-California residents and, possibly due to economic mobility, non-Latino whites are more likely to make multiple school changes than Latinos.

MOBILITY AMONG LOW-INCOME URBAN LATINOS

The Latino population is very diverse. Latinos vary greatly in a number of important ways—in their country of origin, the length of time they have lived in the United States, their socioeconomic status, and the area of the country where they live. In fact, differences among Latinos are often greater than differences between Latinos and other ethnic groups (Valencia, 1991). Consequently, it is important to examine differences among Latinos as well as between Latinos and non-Latino whites.

The CULS data provide one means to examine the experiences of one group— low-income urban Latinos— and some important differences among Latino students in this group. As mentioned, these data differentiate between two groups of low-income urban Latino students: (1) the highest-risk students, whom their 6th grade teachers identified as being more difficult to teach and having more problematic classroom behaviors relative to their classmates; and (2) the at-risk students, who were less difficult and problematic but still at risk of failure by virtue of their poverty and urban status. Although Latino students vary in the extent to which they can be considered at-risk, we created only two groups in order to differentiate the highest-risk students from all the rest. Both groups of students were tracked from when they first entered a Los Angeles area middle school as 7th graders in fall 1990 until summer 1996, when they should have graduated from high school.

The mobility patterns of both groups is shown in Table 2.4. Over the six-year period from grades 7 to 12, 50 percent of the students did not change schools, 33 percent changed schools one or two times, and 18 percent changed schools three or more times. These figures are similar to the NELS data figures reported in Table 2.3 for California Latinos. Based on the NELS data, about 64 percent of California Latinos reported that they did not change schools over the four-year period from grades 8 to 12, 31 percent reported changing schools one or two times, and 6 percent reported changing schools three or more times. Given that the CULS data cover a six-year period of secondary school compared to the four-year period covered by NELS, the two sets of data appear to tell a similar story. The biggest discrepancy has to do with the higher rate of severe mobility (three or more changes) reported in the CULS data.

Table 2.4 Number of Non-promotional School Changes Between Grades 7 and 12 of Highest-Risk and At-Risk Latino Students by Gender (percentage distribution)

	Highest-Risk Students			At-Risk Students			Total
	Males (n=28)	Females (n=18)	Total (n=46)	Males (n=34)	Females (n=24)	Total (n=58)	(n=104)
Grades 7-9							
0	68	83	74*	88	92	90*	83
1-2	21	17	19	9	8	8	13
3 or more	11	0	6	3	0	2	4
Grades 10-12							
0	46**	61**	52	53	63	57	55
1-2	32	39	35	35	29	33	34
3 or more	22	0	13	12	8	10	11
Total Grades 7-12							
0	43+	50+	46	53	54	53	50
1-2	25	50	35	28	38	31	33
3 or more	32	0	19	21	8	16	18
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Difference between highest-risk and at-risk group statistically significant at <.05 level.
+Difference between males and females statistically significant at <.05 level.
**Difference between males and females statistically significant at <.10 level.
NOTE: School changes excluding those due to promotion from middle school to high school.
SOURCE: Tabulations from California Urban Latino Sample of low-income Latino students who entered 7th grade in a large urban middle school in fall 1990. Highest-risk students (n = 46) are reliably identified through teacher ratings and constitute the 40 percent most difficult to teach students. At-risk students (n = 58) are peers not in the highest-risk category, but who are still at-risk of school failure due to low-income.

The CULS data reveal that highest-risk Latino students have significantly higher mobility rates than at-risk students from grades 7 to 9, but similar rates from grades 10 to12. Ninety percent of the at-risk Latino students remained in the same middle school for the entire three years, compared to 74 percent of the highest-risk Latino students. During grades 10 to 12, when the CULS students moved on to senior high school, about 50 percent of the students from both groups remained in a single high school.

The CULS data also reveal different mobility patterns between males and females within the highest-risk group. Latino highest-risk male students were much more mobile than highest-risk female students: 33 percent of the highest-risk male students changed schools three or more times, while none of the highest-risk female students changed schools three or more times.

In addition to documenting the number of school changes made by CULS students, we also examined the types of school changes they made. In particular, we were interested in seeing what types of educational settings urban Latino students transferred into, and whether those settings were located within the same school district, another district in the state, or out of state. We could then see whether school changes were made for "positive" reasons– that is, students sometimes transfer to other than traditional school settings, such as magnet schools, that are more academically beneficial. Identifying the types of transfers students make reveals not only the various options students pursue during high school, but also the extent to which mobility is confined within a district, in which case

districts can mitigate detrimental effects more easily. For example, within-district transfers should make record transfers easier, while out-of-district transfers may make record transfers more difficult.

Table 2.5 shows each type of school change made by CULS students over the six-year period between grades 7 and 12. As the data show, more than 80 percent of the school changes made over this period were to schools within the same district—59 percent of the changes were from one traditional school to another, 5 percent were to magnet schools, and only 17 percent of the changes were to nontraditional schools (e.g., continuation high schools, independent study, special schools). Another 17 percent transferred to a school outside the district and only 2 percent of the changes were to schools outside the state. These data indicate that student mobility is clearly a "local" educational phenomenon. They also reveal that most changes involve transferring to a similar educational setting, which suggests such changes may be of questionable academic value, because a similar school may not provide a different, useful alternative.

Table 2.5 Types of School Changes Between Grades 7 to 12 of Highest-Risk and At-Risk Latino Students by Gender (percentage distribution)

	Highest-Risk Students			At-Risk Students			Total
	Males (n=28)	**Females (n=18)**	**Total (n=46)**	**Males (n=34)**	**Females (n=24)**	**Total (n=58)**	(n=104)
Within District	**74**	**85**	**76**	**88**	**84**	**87**	**81**
Traditional school	56	46	55	68	58	65	59
Magnet school	2	0	1	11		8	5
Nontraditional school	16	39	20	9	26	14	17
Out of District	**26**	0	**20**	**11**	**11**	**11**	**17**
Corrections	14	0	11	0	0	0	6
Private school	2	0	1	2	0	2	2
Public school	10	0	8	5	11	9	9
Out of State	0	**15**	3	0	5	2	2
Total Percent	100	100	100	100	100	100	100
(Total Changes)	(57)	(13)	(70)	(44)	(19)	(63)	(132)
Percent of Changes Back to District	18	0	15	7	16	10	12

NOTE: School changes excluding those due to promotion from middle school to high school.
SOURCE: Tabulations from California Urban Latino Sample of low-income Latino students who entered 7th grade in a large urban middle school in fall 1990. Highest-Risk students (n = 46) are reliably identified through teacher ratings and constitute the 40 percent most difficult to teach students. At-risk students (n = 58) are peers not in the highest-risk category, but who are still at risk of school failure due to low-income.

The types of school changes vary among risk groups and among gender groups. More than twice as many female students, both highest-risk and at-risk, make changes to nontraditional school settings compared to males. Nearly twice as many highest-risk male students transferred to nontraditional school settings compared to at-risk male students. Fourteen percent of the school changes made by male highest-risk Latino students were to schools run by juvenile corrections. Finally, the data also reveal that about 12 percent of the school moves involved transfers back into the

district a student had previously left. This figure further supports the conclusion that much of the mobility exhibited by urban Latinos involves movement within a relatively small geographic area.

The types of school changes we observed for Latino students in Los Angeles are similar to those reported for students in Chicago. A recent study found that 62 percent of all students who left a Chicago public school during the 1992-93 school year re-enrolled in another Chicago public school one year later (Kerbow, 1996). As a result, the report's author concludes:

> This pattern suggests that the phenomenon of student mobility in Chicago is largely internally generated rather than being driven by residential patterns outside the city. The large proportion of mobile students do not actually leave the Chicago Public Schools. In many instances, highly mobile students attend several schools during their elementary years. No one school may retain the student long enough to have a positive impact, particularly if the student has a learning difficulty. Information about the student's progress and abilities may not quickly follow these students who migrate through the system. Thus, the evaluation process may be repeated and the implementation of specific programs delayed. These students have spent their entire elementary years in the Chicago public schools. Nevertheless, it may not be clear who is accountable for their learning (p. 3).

MOBILITY PATTERNS FOR TWO LATINO YOUTH

Although the NELS data reveal the overall incidence of mobility among Latino youth, they do not reveal exactly when students changed schools. Based on our interviews with two of the CULS students, however, we were able to document in more detail the actual mobility patterns of two students. The students were selected because they had high rates of mobility in secondary school, thus providing some insight into the mobility patterns of the most transient students.

The mobility profile for the first student, Eduardo,[10] is shown in Figure 2.1. As the figure indicates, a stable school progression would involve attending one elementary school, one middle school, and one high school— a total of three schools altogether. Eduardo attended eight schools— two elementary schools, three middle schools, and three high schools. In addition, Eduardo dropped out of one high school before re-enrolling in another high school.[11] In the 11th grade, Eduardo dropped out of his third high school and did not return.

The mobility profile for the second student, José, is shown in Figure 2.2. José attended a total of 12 schools— 3 elementary schools, 6 middle schools, and 3 high schools. As with Eduardo, José dropped out of one school before re-enrolling in another. And, like Eduardo, José also dropped out of the last high school he attended and did not finish.

10 We use pseudonyms to refer to these two individuals.

11 In the CULS data, students were identified as a dropout if they were not enrolled in school for 20 consecutive days, the same criterion used in the NELS study to identify dropouts.

Figure 2.1 Mobility Profile for Eduardo

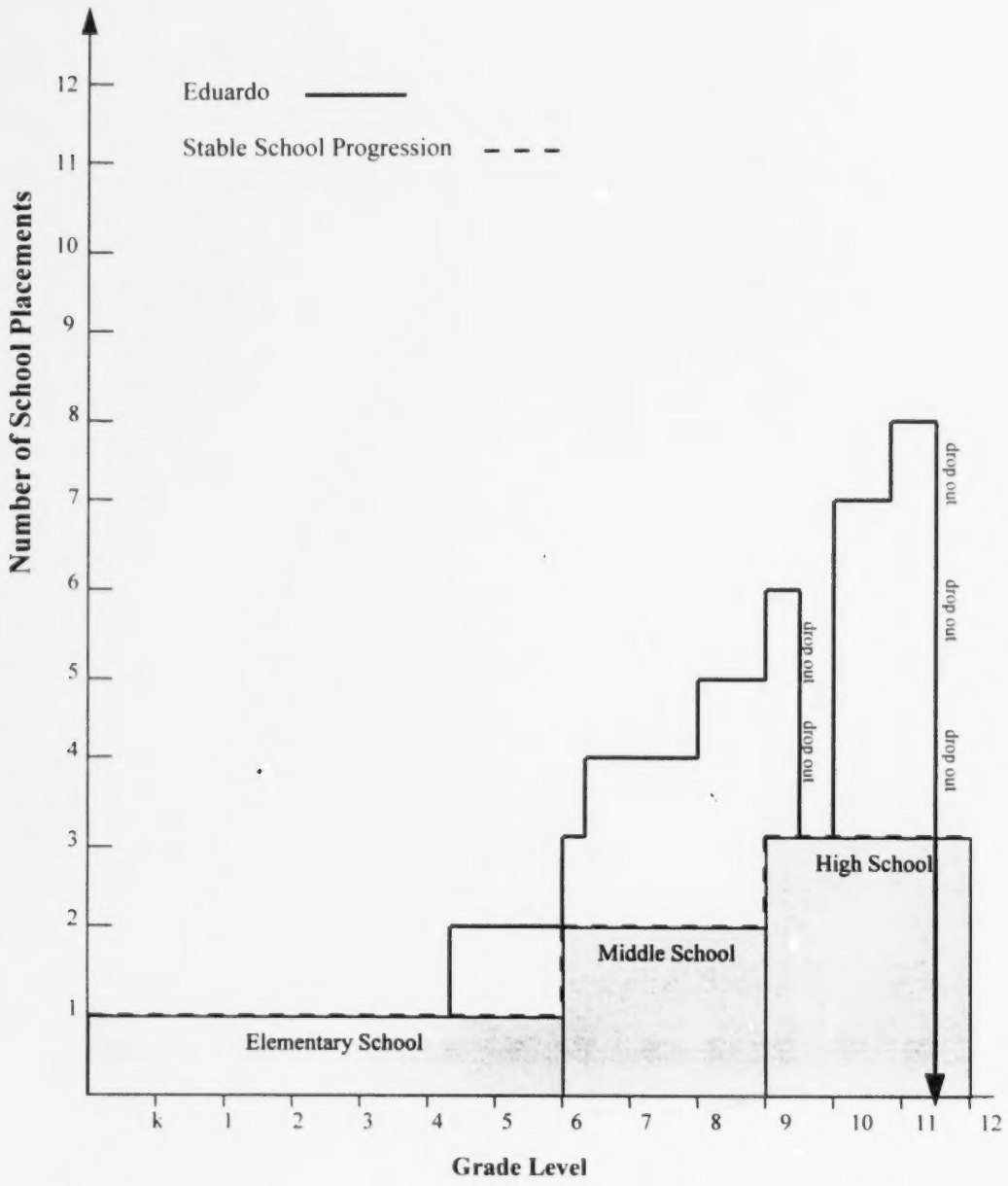

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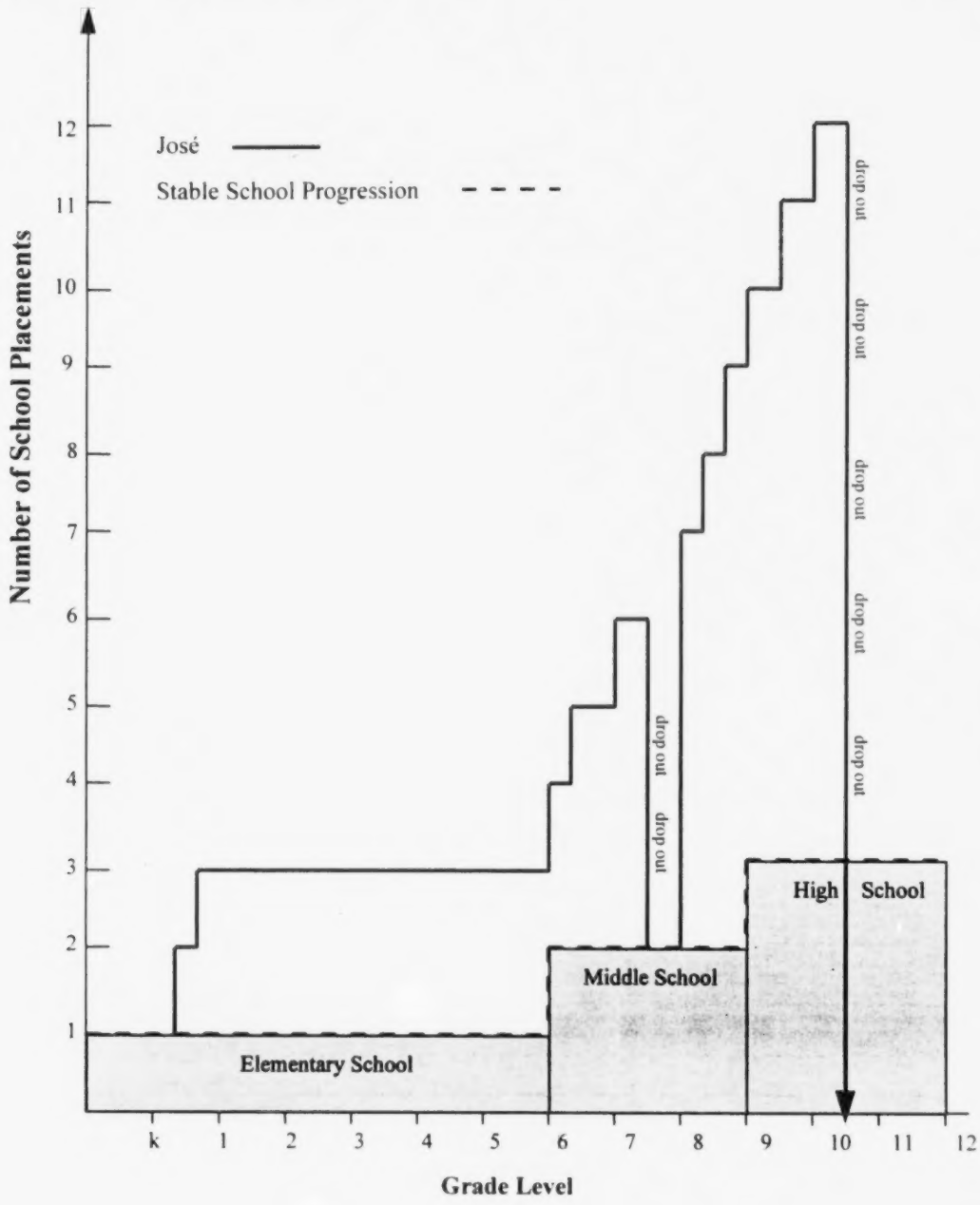
Figure 2.2 Mobility Profile for José



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SUMMARY

As we confirmed, U.S. students are highly mobile. In fact, more American students make non-promotional school changes than remain in a stable pattern of attending a single elementary, middle, and high school. Among students who have changed schools over their elementary and secondary careers, about one-third made one unscheduled school change, another 20 percent made two unscheduled school changes, and more than 40 percent made three or more unscheduled school changes. School changes were more common during elementary school than during secondary school.

Our data show that mobility rates are generally higher in California than elsewhere in the United States. Almost 75 percent of California students made unscheduled school changes compared to 60 percent in the rest of the nation. Interestingly, while Latino students in other states are more mobile than non-Latino white students, Latino students in California appear to be less mobile than non-Latino white students at the elementary level, but more mobile at the secondary level. We speculate that this may be due to differing patterns of economic mobility within California for the two groups.

In examining the secondary school mobility patterns of a sample low-income urban Latino community in Los Angeles, we gained additional insights into the mobility patterns of Latino students. First, we found that mobility rates were higher among "highest-risk" Latino students than among other Latino students. Second, we found that the majority of school changes for Latino urban students involved transfers from traditional school settings to other, nontraditional school settings within the same district. This was similar to a finding in the Chicago public schools. Both studies suggest that student mobility, at least within urban school systems, is largely a local phenomenon, making it more amendable by local policy initiatives.

Chapter 3

THE CAUSES OF STUDENT MOBILITY

Students change schools for many reasons. In some cases, students' families move, requiring students to change schools. In other cases, students and their families may be unhappy with the education they are receiving at one school and change schools to find a more suitable education. In still other cases, the schools that students initially attend force them to leave because of academic or social problems, such as poor attendance or getting into fights.

In this chapter we investigate the reasons students change schools and some underlying causes of student mobility. Of course it is difficult to fully understand the causes of any human behavior. Even when people are asked to explain their behavior, they may not be able to reveal what prompted their actions. Thus in this chapter we not only examine the stated reasons for changing schools, but also some correlates or predictors of mobility that suggest other causal factors.

We focused our analysis on mobility over the four-year period from grades 8 to 12, in part because the NELS data provides valuable information on residential and student mobility during this period. But we also looked at this period because, as we show in the next chapter, mobility during these four years is most critical to whether students eventually finish high school.

PARENTS' REPORTED REASONS FOR STUDENTS CHANGING SCHOOLS

In 1992, parents of NELS students were asked whether their sons or daughters had changed schools in the 4-year period since 8th grade. If the students had changed schools, the parents were asked the reasons for the most recent change. As we reported in the previous chapter, adolescents were more likely to report they had changed schools than their parents. We attributed this discrepancy, in part, to parents not always being informed about what their adolescents were doing in high school. Thus, the parents' responses about why their adolescents changed schools cannot reveal all of the reasons. Despite this limitation, it is still worthwhile to examine the reasons parents give for the school changes they were aware of. These reasons are displayed in Table 3.1. Because parents were able to identify more than one reason, the figures represent only the proportion of parents who indicated each stated reason.

The parents' reasons fall into three categories. The first are family-initiated reasons due to the family moving. Figures show that 58 percent of the parent-reported school changes were because of moving. In 11 percent of the cases, parents reported that they moved *in order* to enroll their adolescent in another school; however, in most cases the family moved for other reasons. There were no large differences in these figures between respondents in California and in other states or between Latino and non-Latino white parents.

The second reason — according to more than 30 percent of all parents nationwide— was that their adolescents asked to change schools. Latino parents, especially in California, were more likely than non-Latino white parents to report that their adolescents changed schools because they asked to. In 30 percent of the cases, parents reported that their adolescent changed schools to take advantage of a specific educational program, or asked to be transferred to a public, private, or magnet school.

Table 3.1 Parents' Reported Reason for Most Recent School Change between Grades 8 and 12, by California Residency for Latinos and Non-Latino Whites (percent distribution)

	California			Other States			Total
	Latinos	Non-Latino Whites	All Students	Latinos	Non-Latino Whites	All Students	
Family-Initiated							
Family moved to Enroll in other school	9	14	15	10	10	11	12
Family moved for other reasons	42	45	43	47	51	47	47
Student-Initiated							
Student requested	61	38	46	42	37	37	38
Switch to private	7	8	9	7	7	6	6
Switch to public	20	7	9	2	8	7	7
Switch to magnet	6	4	5	1	1	2	2
Switch to special course	9	10	12	16	13	13	13
School-Initiated							
Discipline problems	11	16	18	6	2	5	6
Academic problems	24	14	15	5	4	4	5
School closed	4	0	3	1	2	3	3

NOTE: Responses based on data from 12th-grade parent questionnaire. School changes excluding those due to promotion from elementary to middle school and from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey

The third reason parents reported was that the school asked their adolescent to transfer, because of either disciplinary or academic problems. In reporting this reason, there were significant differences between California parents and parents in other states. In California, about 30 percent of the parents said their adolescents changed schools because they were forced to; these figures were similar for both Latino and non-Latino white parents. In contrast, only about 10 percent of the parents in other states reported that their adolescents were forced to change schools.

Altogether, these figures suggest that more than half of all school changes reported by parents of high-school students were due to school-related reasons. In many cases, students asked to be transferred to another school, presumably to find a better, more suitable school environment. In a smaller but still sizable number of cases, students were forced to transfer because of academic or social problems.

FAMILY-RELATED REASONS FOR SCHOOL CHANGES

In 1992, NELS students and dropouts were asked whether they had changed schools in the 4-year period since 8th grade. Unlike their parents, they were not asked why they changed schools, but they were asked whether their family had moved in the previous four-year period Their responses made it possible to examine the relationship between school mobility and residential mobility.

Many people believe that the main reason students change school is because their families move; indeed, California families do move frequently. According to the NELS data, almost 40 percent of California 8th-grade students changed residences between grades 8 and 12 (Table 3.2). This figure is only slightly higher than the rate of residential mobility in other states. The figures also reveal that Latinos in California move less frequently than non-Latino whites, while in other states Latinos move

Table 3.2 Residential and School Changes Between Grades 8 and 12 by California Residency for Latinos and Non-Latino Whites (percentage distribution)

	California			Other States			Total
	Latinos	**Non-Latino Whites**	**Total**	**Latinos**	**Non-Latino Whites**	**Total**	
Moved	36	39	38	43	36	37	37
Changed schools	19	23	21	21	17	18	19
Did not change schools	17	16	17	22	19	19	19
Did not move	64	62	62	57	64	63	63
Changed schools	17	9	13	10	6	8	8
Did not change schools	47	53	49	47	58	55	55
Total	100	100	100	100	100	100	100
Percent of residential changes *not* associated with changing schools	46	42	44	51	52	51	50
Percent of school changes *not* associated with moving	47	28	38	32	26	30	31

NOTE: Responses based on data from 12th-grade student questionnaire. School changes exclude those due to promotion from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

more than non-Latino whites. Although it is commonly perceived that Latinos are more mobile than non-Latino whites, our data suggest otherwise. A recent study of residential mobility in the five Southwestern states between 1985 and 1990 found that U.S.-born Latinos were less mobile than U.S.-born non-Latino whites, which is consistent with our findings (Warren, 1996). Of course, changing residences does not necessarily result in students changing schools; families can change residences and still remain in the same school attendance area. In fact, recent legislation in California enables students to remain in their local school even if their family moves to another school attendance area.

According to NELS data, 50 percent of all residential moves between grades 8 and 12 did not result in students changing schools. In California, the figure was somewhat lower than in other states.

Just as some students move without changing schools, other students change schools without moving. Nationally, 30 percent of all school changes were not associated with a change of residence. In California, the figure was somewhat higher (37 percent), suggesting that students in California are somewhat more likely to change schools for other reasons.

These aggregate figures mask considerable differences between Latino and non-Latino white students. In California, only 25 percent of non-Latino white students who changed schools between grades 8 and 12 did not move, while almost 50 percent of Latino students who changed schools between grades 8 and 12 did not move. That is, Latino students were twice as likely as non-Latino white students to change high schools for reasons other than moving. A recent study of mobility in the Chicago public schools, where a majority of students are from racial and ethnic minorities, found that 40 percent of the school transfers within that school system did not involve a change of residence (Kerbow, 1996). Thus the NELS figures for Latinos in California are more similar to those for minority students in at least one large urban school system.

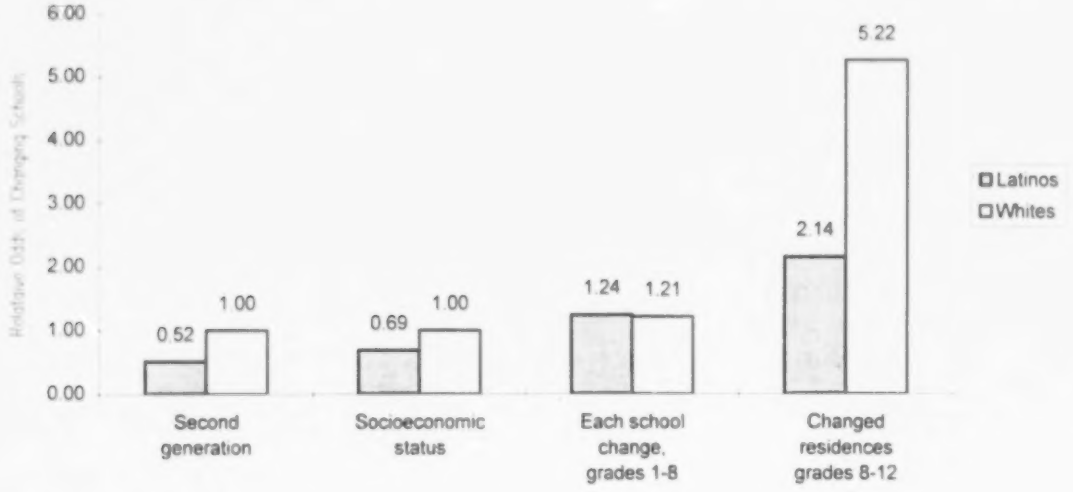
These data are somewhat at odds with the figures reported earlier by parents. Parents were more likely than their adolescents to report that school changes were not related to moving. We believe these differences can be attributed to the time period being reported. Parents were reporting the reason for the *last* school change, while their adolescents were reporting whether they had *ever* moved over the previous 4-year period. Because students were focusing on a longer period of time, it is more likely they would report that their families moved.

In addition to residential moves, what other characteristics of families prompted students to change schools? Can these characteristics help explain why Latino students are more likely than non-Latino white students to change schools, even when their families don't move?

To investigate these questions, we used the NELS data to test a series of statistical models to predict whether students changed schools. The models estimate the independent impact of a series of predictor variables. By examining the simultaneous effects of several factors, it is possible to identify which factors are best able to predict mobility, after controlling for the effects of other factors. For example, if both residential mobility and school mobility were related to family socioeconomic status, then such an analysis might reveal that family socioeconomic status is better able to predict school mobility than residential mobility. We performed the analysis separately for Latinos and non-Latino whites in order to see whether different factors predict mobility for these two groups. The complete results of the analysis are shown in Appendix Table A.5.

The results confirm that changing residences increased the odds of changing schools, but more so for non-Latino whites than Latinos. A one-unit increase in socioeconomic status reduced the odds of changing schools by about one-third. Non-Latino white students who moved were five times more likely to change schools as non-Latino white students who did not move, after controlling for the effects of socioeconomic status and other family characteristics (Figure 3.1). But Latino students who moved were only twice as likely to change schools as Latino students who did not move.

Figure 3.1 Adjusted Relative Odds of Changing Schools between Grades 8 and 12 Due to Student and Family Characteristics



Relative odds represent the ratio of the predicted odds of changing schools (other than those due to promotion from one type of school to another) associated with a one-unit increase in each factor to the predicted odds of changing schools without the one-unit increase, controlling for differences in other factors. Predicted odds ratios of one represent estimates that were not statistically significant at the .05 level.
SOURCE: Appendix Table A.5.

The results revealed that other characteristics of students and families also predicted changing schools during high school. Among Latino students, second-generation students were half as likely to change schools as third-generation students, and middle-socioeconomic status Latino students were about 30 percent less likely to change schools than low-socioeconomic status Latino students. Neither immigration status nor socioeconomic status predicted differences in school mobility among non-Latino white students. But non-Latino white students were more likely to come from higher socioeconomic status backgrounds and be from third-generation families than Latino students (see Appendix Table A.4).

The results also revealed that both Latino and non-Latino white students who changed schools between grades 1 and 8 were more likely to change schools between grades 8 and 12. Each elementary school change increased the odds of changing high schools by about 20 percent.

The NELS data reveal which family-related factors predict non-promotional school changes, but not how and why such changes occur. Through our interviews with CULS students, we learned more about how family circumstances lead to students' changing schools.

One student was Eduardo. Eduardo never knew his father— his parents divorced when he was an infant. His mother struggled to pay the rent with the low wages she earned working in a textile factory. So from time to time, the family moved to make ends meet. When Eduardo was in the middle of 5th grade, he and his mother and older brother moved to share an apartment with a Mexican-American family. The search for economic security forced Eduardo's family into crowded living conditions and, for the first time, he had to change schools. "I didn't have a choice as to whether or not Eduardo would change schools," his mother said. Life hasn't afforded Eduardo's mother many choices.

Eduardo's early school mobility came from economic necessity. For another CULS student, José, mobility was the result of family domestic problems.

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During his elementary school years, José moved from place to place because his parents often fought; their relationship was "on-again-off-again" all during his childhood.

> My dad was always arguing with my mom and they would always get into their fights, you know. Once in awhile he would kick my mom out or my mom would leave because he would be mean.

Due to family instability, José was forced to leave his favorite elementary school during the first grade. He later returned to the same school and graduated from 6th grade.

The early residential and school moves were tough on José, both emotionally and in an educational sense.

> I would miss my dad and I would wonder why we were moving so much. I would get mad because I liked [first elementary school] and they were always trying to move me around. And everywhere I would go the school was overcrowded and they would try to bus me. And the last time when we moved to [another city] I thought we would never come back to this house.

His mother laments the moves that were forced on José during his early years.

> I think it is worse when you take your kid and move them from one school to another. The elementary school change hurts because you're just confusing [kids.]

In both of these situations, the student changed schools because the family or, in these two cases, the mother moved. In secondary school, students can leave their families on their own accord and change schools in the process. In this situation, the "family" may not move, but the child does. Alejandro was one such student.

Alejandro's mother was 15 years old when he was born; his parents never married. When Alejandro was an infant, his father was killed in a gang shooting. Alejandro lived with his mother, his 14-year-old half-sister whose father was also deceased, and two younger half-brothers whose father was in prison. Alejandro's mother was an alcohol abuser and ex-drug addict. She did not work and the family lived on social assistance. Despite his life circumstances and lack of family support, Alejandro was never involved in gangs nor did he have any record of delinquency. Between grades 7 and 10, Alejandro was never sure where he would be sleeping each night. For years he slept at different relatives' homes and attended different schools while his mother stayed in one residence.

As these stories illustrate, a variety of family situations and circumstances can lead to students changing schools.

SCHOOL-RELATED REASONS SCHOOL CHANGES

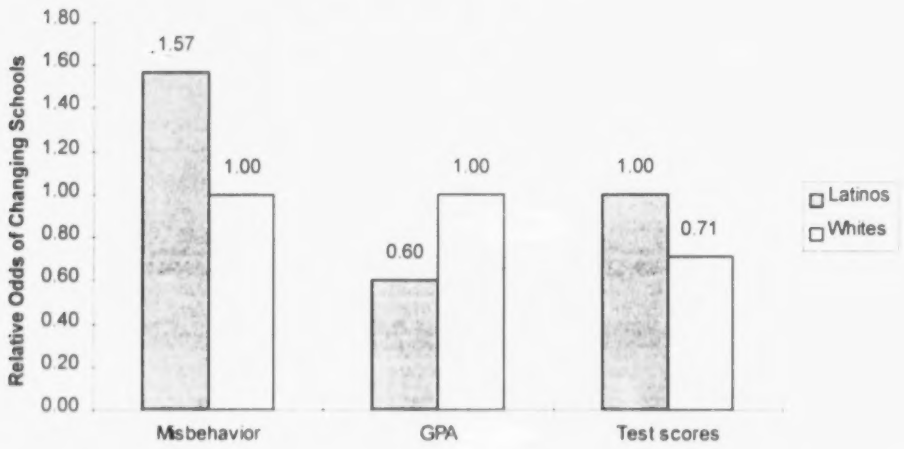
Students change schools not only for family-related reasons, but also for school-related reasons. One such reason is academic: Students may voluntarily transfer from one school, where they are academically disengaged, to another school in search of a more academically suitable program. Another reason is misbehavior: Students can be expelled or forced to transfer to another school if they misbehave. Earlier we saw that parents reported that most school changes were for school-related reasons.

We investigated some possible school-related reasons for changing schools through an additional statistical analysis of the NELS data, similar to the analysis presented earlier. As before, we examined the impact of several school-related predictors of school mobility between grades 8 and 12 for both Latinos and non-Latino whites, after controlling for the effects of the student and family

characteristics we examined earlier (e.g., socioeconomic status). The complete results of the analysis are shown in Table A.3. In Figure 3.2 we show the statistically significant predictors of school mobility.

The results show that Latino students who misbehaved in 8th grade were 57 percent more likely to change high schools than Latinos who did not misbehave. In contrast, misbehavior did not predict school changes for non-Latino white students. These results support the notion that nonacademic factors play a role in school mobility for Latino students, but not for non-Latino white students.

Figure 3.2 Adjusted Relative Odds of Changing Schools Between Grades 8 and 12 Due to School Factors



NOTE: Relative odds represent the ratio of the predicted odds of changing schools (other than those due to promotion from one type of school to another) associated with a one-unit increase in each factor to the predicted odds of changing schools without the one-unit increase. Predicted odds ratios of one represent estimates that were not statistically significant at the .05 level.
SOURCE: Appendix Table A.4.

But academic factors do play a role: Among Latinos, a one-point increase in GPA reduced the odds of changing schools by 40 percent, while test scores did not predict school changes. Among non-Latino whites, a one-standard deviation increase in achievement test scores reduced the odds of changing schools by almost 30 percent, while grades did not predict school changes.

The statistical models suggest that a number of academic and nonacademic school factors predict student mobility. Most of these factors pertain either to the academic behavior of students or to their social behavior. Of course, both types of factors can be related: Students who misbehave are likely to have poor academic achievement; or, perhaps students who are frustrated with their academic performance are more likely to misbehave. In either case, students with poor social or academic performance are more likely to change schools.

Two of the Latino students we interviewed, Eduardo and José, had both academic and social problems in junior high and high school that led to their changing schools.

Eduardo. Behavior problems and an unwillingness to follow school dress codes forced Eduardo to leave the first high school he attended.

> They kicked me out of [first high school] for big clothes. You can't have [pants] dragging from the bottom. You can't be stepping on them. I ain't gonna buy new pants to go to school!

In eleventh grade, he transferred to yet another high school. Once again, Eduardo ran into problems with the dress code and ended his school career by getting expelled.

> They kicked me out for not really going to school, because I didn't really go— and for the big pants, too . . . They just told me, 'You're gonna have to leave.' And after that they didn't let me back in. I was too old.

José. Changes in the school environment weren't the only problems caused by José's high transience rate. School had become an unsafe place for José. Junior high students took note of the new kid on the block and often pigeonholed him as either a transplanted gang rival or a new recruit. Since he lived in a neighborhood that many of his school peers didn't like, he was labeled one of "them." He paid for it, and so did his schooling.

> There would be certain places you can't go 'cause maybe you wont's get along with the people in that place and I couldn't do all the things I should've been able to. I couldn't stay after school too much . . . I guess they considered me [a rival.] People from each city really didn't like each other. They just hated each other, you know? That's the way it was.

School attendance and behavior problems soon followed. He moved from his first junior high placement to yet another school where he had "problems with people." At the beginning of 8th grade he was back in his original junior high school, but he was kicked out before the school year ended.

That summer José and his mother moved to another community about an hour from home. In part, she was concerned about his troubles and thought the move might help José. "Over there there weren't many gangs," she said. But the move was extremely difficult for José and he soon found himself running with the wrong crowd.

José's situation illustrates how problems in school can prompt a family to move, resulting in a student changing schools. Thus family-related reasons for changing schools, specifically moving, should not always be viewed as being independent of school-related reasons.

SUMMARY

In this chapter we investigated both the stated reasons students change schools and some predictors of mobility during high school. We found that students change schools for many reasons, some of which are family-related reasons. Both nationally and in California about 50 to 70 percent of all secondary school changes involved changing residences, although reports by parents suggest that at least some moves were prompted by a desire to enroll their student in another school. In general, non-Latino whites were more likely to change schools because of residential moves than Latinos. Interview data from two highly mobile Latino youths reveal that family disruption, such as divorce or separation, often contributes to family relocation.

We also found that other family background factors predicted non-promotional school changes. For both non-Latino whites and Latinos, students who changed schools during elementary school were more likely to change schools during high school. If school mobility reflects a lack of engagement or commitment in school, then the relation between elementary school mobility and

secondary school mobility suggests that disengagement tends to persist for students' entire school lives. For Latinos, second-generation students change schools less than first- or third-generation students, which supports the idea that second-generation Latinos have both the academic skills and social behavior to be successful in school (Suarez-Orozco and Suarez-Orozco, 1995). Socioeconomic status also predicts school changes for Latino students. Since Latinos have lower average socioeconomic status than non-Latino white students, an increase in socioeconomic status for Latinos may mean a change from low-income to working class, which may provide enough improvement in economic well-being to move into a more middle-class neighborhood.

But not all school changes are prompted by residential changes and family circumstances. For Latinos, both misbehavior and academic problems predicted whether students changed schools between grades 8 and 12, while for non-Latino whites, only academic problems predicted school changes. These data support the proposition that schools more frequently use the strategy of transferring students for behavior problems with Latino than with non-Latino white adolescents.

The findings suggest that school mobility is a multifaceted problem. At least at the secondary level, school mobility is not simply a result of families moving. A significant proportion of school changes appear to be prompted by both academic and behavior problems in schools.

Chapter 4

THE EDUCATIONAL CONSEQUENCES OF STUDENT MOBILITY

In this chapter we investigate the educational consequences of changing high schools. If non-promotional school changes do, in fact, provide students with better learning opportunities, then there should be positive educational consequences to changing schools. However, if students are forced to leave school because their families move or because of school-initiated factors, then there may be negative educational consequences.

We focus on one specific educational consequence: completing high school. Although high-school completion represents only one aspect of educational achievement, it is a particularly important one. High-school completion is the gateway to higher education. For students who do not go on to higher education, previous research has shown that completing high school has a stronger impact on subsequent labor market earnings than what is learned (academic achievement) in high school (Stern et al., 1989).

In addition to examining the impact of mobility on high-school completion, we also examine the relationship between school mobility and enrollment stability.

THE IMPACT OF MOBILITY ON HIGH SCHOOL COMPLETION

How does mobility affect the chances of finishing high school for California Latinos? To answer this question, we examined the high-school completion status of NELS students in 1994, two years after they should have completed high school. We compared completion rates among Latino and non-Latino white students who made zero, one, or two or more non-promotional school changes over the four-year period between grades 8 and 12. The results are shown in 4.1

Table 4.1 High School Completion Status by Number of School Changes Between Grades 8 and 12 for California Latinos and non-Latino Whites (percentage distribution)

	Number of School Changes, Grades 8-12			
	0	1	2 or More	Total
I. LATINOS				
Received high-school diploma	89	63	60	79
Received GED or certificate	3	7	11	5
Had not finished 2 years after 12th grade	9	30	30	16
Total	100	100	100	100
II. NON-LATINO WHITES				
Received high-school diploma	96	83	62	89
Received GED or certificate	1	5	8	3
Had not finished 2 years after 12th grade	3	12	31	8
Total	100	100	100	100

NOTE: School changes from grades 1 to 8 based on data from 8th-grade parent questionnaire. School changes from grades 8 to 12 based on data from 12th-grade student questionnaire. School changes excluding those due to promotion from elementary to middle school and from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

The figures confirm the fact that Latinos were less likely to finish high school than non-Latino whites. Two years after students should have completed high school, 79 percent of Latinos had received a regular high-school diploma compared to 89 percent for non-Latino whites.

Students who changed high schools were less likely to complete high school than students who remained in the same high school for four years. Among Latinos, 87 percent of students who remained in the same high school received a high-school diploma, while only 63 percent of students who changed schools once, and only 60 percent of students who changed schools more than once, received a regular high-school diploma. Among non-Latino whites, 96 percent of students who remained in the same high school received a high-school diploma, while only 83 percent of students who changed school once, and only 62 percent of students who changed schools more than once, received a high-school diploma. For both Latinos and non-Latino whites, students who changed schools even once were also more likely to receive a high school equivalency diploma, as opposed to a regular diploma than students who remained in the same high school.

The data also reveal that although Latino adolescents who remained in the same high school or made one school change were much less likely to complete high school than non-Latino white adolescents, Latinos and non-Latino white adolescents who made two or more school changes were equally likely to graduate from high school (i.e., earn a high-school diploma). The biggest disparity between Latinos and non-Latino whites appears to be the impact of one school change. Although one school change diminished the chances of finishing high school for both Latinos and non-Latino whites, it had a far more detrimental impact on Latinos. These differential patterns suggest that more non-Latino white students than Latino students were making beneficial school changes during high school.

School mobility had an even more detrimental impact on high-school completion for urban Latinos (Table 4.2). Only 46 percent of Latino students in the CULS data completed high school, a lower percentage than for Latinos statewide, but not surprising in light of the family, school, and community conditions of these high-poverty Latino students.[12] The data also reveal that "risk" among Latino adolescents is related to high-school completion. Among the highest-risk students, only one-quarter completed high school, while among the at-risk students 62 percent completed high school. Completion rates were much lower among mobile students. Sixty-five percent of students who did not make any non-promotional school changes between grades 7 and 12 completed high school. But only 27 percent of students who made one or more non-promotional school changes between grades 7 and 12 completed high school.

Differences in high-school completion rates between mobile and stable students existed among at-risk males and females and among highest-risk females, but not among highest-risk males. Remaining in the same middle school for the entire three years was also critical for urban Latino students. Of the students who left the middle school early, only 10 percent eventually completed high school compared to 55 percent who remained in the same middle school.

12 We determined completion status about six months after the12th grade whereas NELS determined completion status two years after the 12th grade, which could contribute to our lower percentage.

Table 4.2 Percent Completing High School by Number of Non-promotional School Changes Between Grades 7 and 12 of Highest-Risk and At-Risk Latino Students by Gender (percentage distribution)

	Highest-Risk Students			At-Risk Students			Total
	Males (n=28)	Females (n=18)	Total (n=46)	Males (n=34)	Females (n=24)	Total (n=58)	(n=104)
Grades 7-9							
0	28	46	36	68	67	67	55
1 or more	10	0	7	33	0	17	10
Total Grades 7-12							
0	33	56⁺	43⁺	83⁺	77⁺	81⁺	65⁺
1 or more	12	11⁺	12⁺	44⁺	36⁺	41⁺	27⁺
Total	21*	33	26*	65*	58	62*	46

*Difference between highest-risk and at-risk group statistically significant at $<.05$ level.
⁺Difference between group with 0 moves and group with 1 or more moves statistically significant at $<.05$ level.
⁺⁺Difference between group with 0 moves and group with 1 or more moves statistically significant at $<.10$ level.
NOTE: School changes excluding those due to promotion from middle school to high school.
SOURCE: Tabulations from California Urban Latino Sample of low-income Latino students who entered 7th grade in a large urban middle school in fall 1990. Highest-Risk students (n = 46) are reliably identified through teacher ratings and constitute the 40 percent most difficult to teach students. At-risk students (n = 58) are peers not in the highest-risk category, but who are still at-risk of school failure due to low-income.

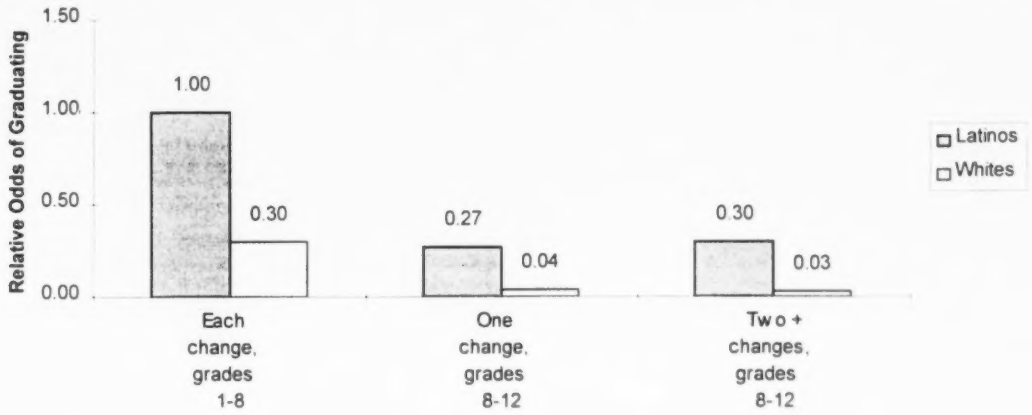
Although these data show that students who change schools are less likely to complete high school, they are unable to show whether school changes were the primary cause of not completing (dropping out of) high school—or whether other characteristics of students, such as poor school performance or misbehavior in earlier grades, contributed to both school changes and dropping out of high school.

In order to assess the impact of school changes on high-school completion, we performed a multivariate statistical analysis of the NELS data. By examining the simultaneous effects of several factors, it is possible to determine the net impact of school mobility on the likelihood of high-school graduation, after controlling for the effects of other factors that may also influence the likelihood of both changing schools and finishing high school. For example, if both school mobility and high-school completion were related to family socioeconomic status, then such an analysis might reveal that school changes may have little direct impact on high-school completion, after controlling for the impact of family socioeconomic status on high-school completion. We performed the analysis separately for Latinos and non-Latino whites in order to see whether different factors predict mobility for these two groups. First we examined the impact of student and family background factors on the likelihood of graduating from high school. Second, we examined the impact of 8th-grade school factors on the likelihood of graduating from high school, controlling for student and family factors. Finally, we examined the impact of school changes on the likelihood of graduating from high school, controlling for the previous factors. The complete results of the analysis are shown in Appendix Tables A.6 and A.7.[13] Here we simply discuss the significant results.

13 This analysis was used to examine the impact of these factors on the likelihood of completing a high-school diploma or the likelihood of receiving a GED versus not finishing high school. We only discuss the former results in this report, although the entire analysis is shown in Tables A.5 and A.6.

First, we examined the net impact of school changes on the likelihood of completing high school, after controlling for student and family characteristics (e.g., socioeconomic status) and the schooling experiences of students in the 8th grade (e.g., grades, absenteeism). The results are shown in Figure 4.1.

Figure 4.1 Adjusted Relative Odds of Graduating from High School Due to School Changes

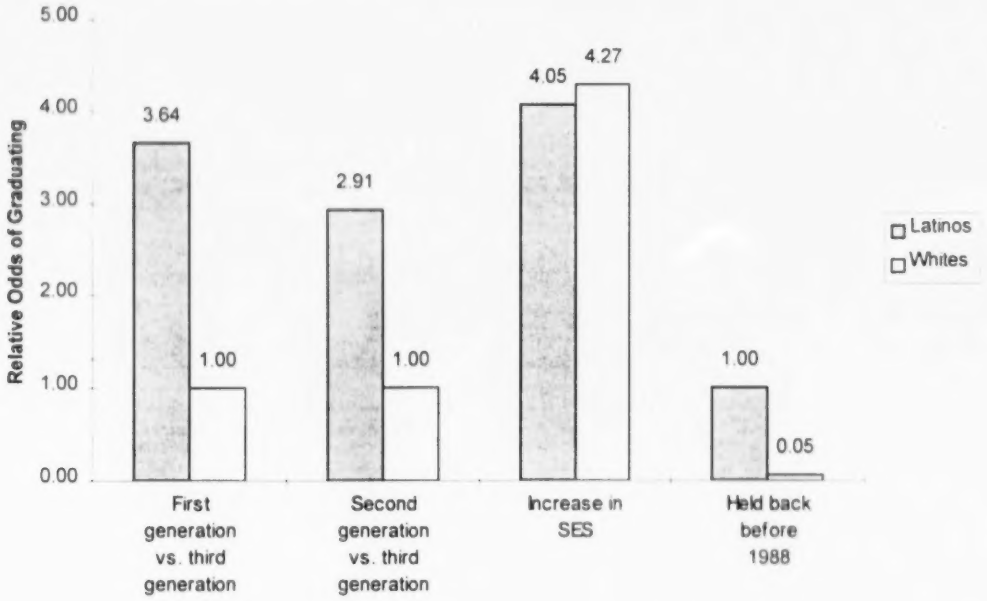


NOTE: Relative odds represent the ratio of the predicted odds of changing schools (other than those due to promotion from one type of school to another) associated with a one-unit increase in each factor to the predicted odds of changing schools without the one-unit increase, controlling for other factors. Predicted odds ratios of one represent estimates that were not statistically significant at the .05 level.
SOURCE: Appendix Tables A.6 and A.7.

The results show that school changes adversely affect the odds of graduating from high school, even after controlling for the effects of other factors. Moreover, the impact of mobility is more detrimental for non-Latino whites than for Latinos. Latinos who made even one school change between grades 8 and 12 were one-third less likely to finish high school than Latinos who did not change high schools. Among non-Latino whites, the impact of changing schools was even more severe. Non-Latino white students who changed schools between grades 8 and 12 were 20 times more likely to not finish high school as students who did not change schools! Even school changes in elementary school adversely affected the odds of finishing high school among non-Latino whites: Each time a non-Latino white student changed schools between grades 1 and 8, he or she was three times less likely to finish high school!

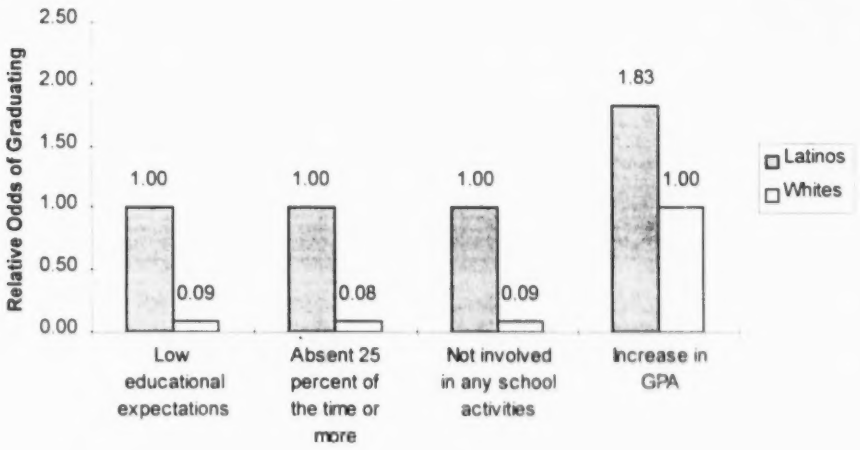
The analysis revealed that a number of student and family factors also predicted whether students completed high school (Figure 4.2). First, among Latinos, first- and second-generation students are three times more likely to graduate from high school as third-generation students, after controlling for the effects of other student and family factors. Second, among both Latinos and non-Latino whites, students from a higher socioeconomic status are four times more likely to complete high school as students from lower socioeconomic status families. Finally, among non-Latino whites, students who were held back between grades 1 and 8 were about 20 times less likely to graduate from high school as students who were not held back. These results are generally consistent with findings from other studies that have examined the effects of similar factors on dropping out of high school (Rumberger, 1995; Valverde, 1987; Velez, 1989).

Figure 4.2 Adjusted Relative Odds of Graduating from High School Due to Student and Family Characteristics



NOTE: Relative odds represent the ratio of the predicted odds of changing schools (other than those due to promotion from one type of school to another) associated with a one-unit increase in each factor to the predicted odds of changing schools without the one-unit increase, controlling for other factors. Predicted odds ratios of one represent estimates that were not statistically significant at the .05 level.
SOURCE: Appendix Tables A.6 and A.7.

Figure 4.3 Adjusted Relative Odds of Graduating from High School Due to 8th Grade School Experiences



NOTE: Relative odds represent the ratio of the predicted odds of changing schools (other than those due to promotion from one type of school to another) associated with a one-unit increase in each factor to the predicted odds of changing schools without the one-unit increase, controlling for other factors. Predicted odds ratios of one represent estimates that were not statistically significant at the .05 level.
SOURCE: Appendix Tables A.6 and A.7.

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School experiences in 8th grade also influenced the likelihood of graduating from high school (Figure 4.3). Among Latino students, only grade-point average significantly influenced the likelihood of completing high school: a one-point increase in GPA increased the odds of Latino students finishing high school by 80 percent. Among non-Latino white students, other factors predicted high-school graduation: Students who reported low educational expectations, students who reported that they were absent more than 25 percent of the time during 8th grade, and students who reported that they did not participate in any extracurricular activities, were 90 percent less likely to complete high school than other students.

SCHOOL STABILITY VERSUS ENROLLMENT STABILITY

The preceding analysis suggests that students who change schools are less likely to complete high school. But school mobility and school completion may be more interrelated than that. In our conceptual model presented in Chapter 1, we suggested that school changes and enrollment changes (dropping in and out of school) may represent two different aspects of educational stability. The cases of Eduardo and José presented in Chapter 2 suggest that they are. Both José and Eduardo not only changed schools frequently, they also quit school one time in between changing schools. But can we observe a similar relationship among other urban Latino students?

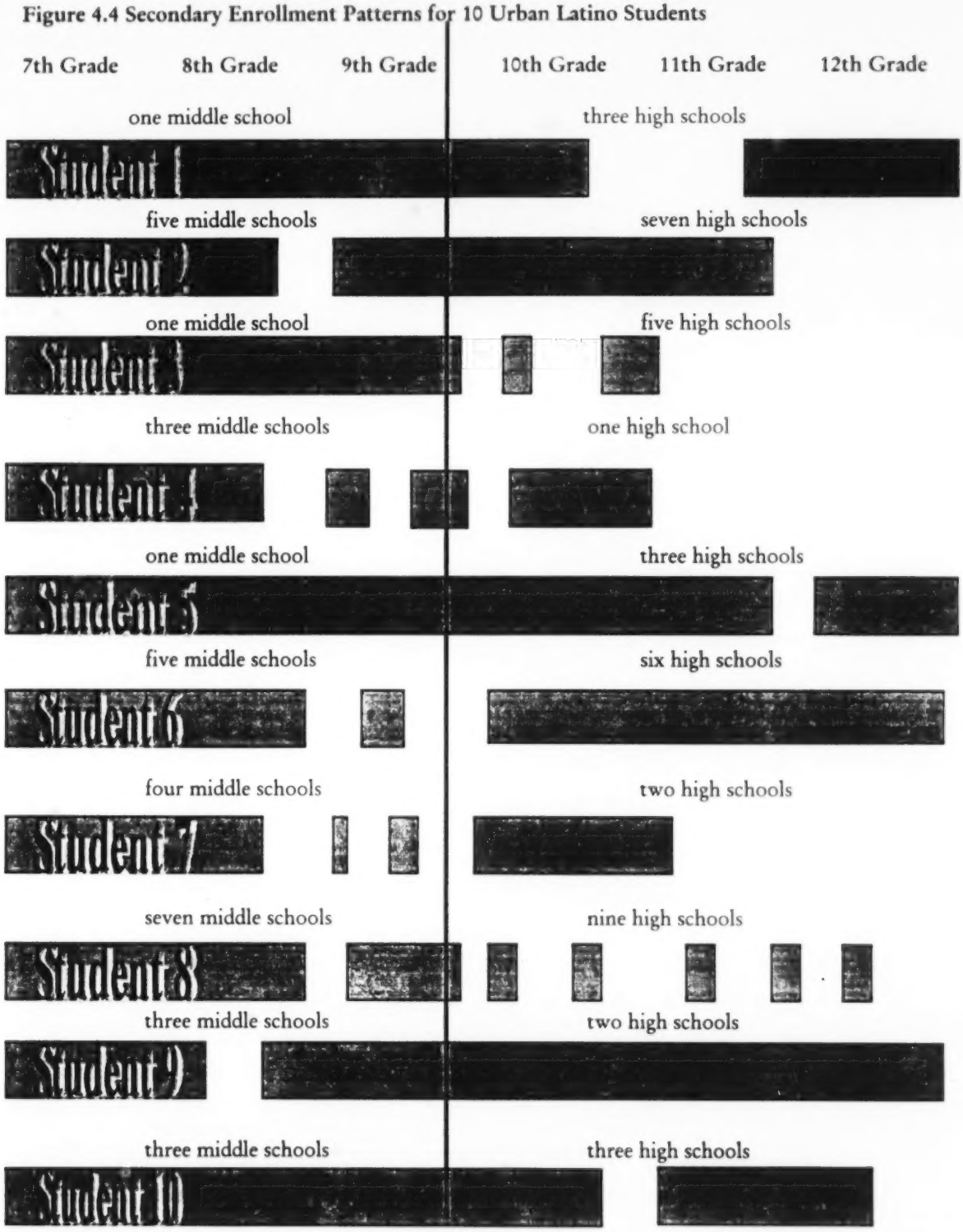
To answer this question, we examined the enrollment histories of all 104 CULS students between 1990, when they started 7th grade, and 1996, when they should have completed high school. Enrollment patterns for 10 CULS students who dropped out of school during this period and re-enrolled at least once are displayed in Figure 4.4. In reading Figure 4.4, the boxes represent periods of enrollment in a school(s) and the space in between the boxes represent periods of not being enrolled in school.

The data confirm the patterns that we observed with Eduardo and José: Students who change enrollment status (i.e., drop in and out of school) also change schools. Of the 10 students who dropped out, not one simply attended a single middle school and a single high school. Rather, all the students enrolled in several secondary schools, either multiple middle schools, multiple high schools, or both. One student attended seven middle schools and nine high schools!

The data also reveal several distinct enrollment patterns. One pattern, displayed by five of the students, is a single period out of school followed by re-enrollment. But even these students changed schools several times during their secondary schooling. Another pattern, displayed by three students, is characterized by dropping in and out of school during a single school year followed by relatively stable enrollment the rest of the time. The last pattern, displayed by two students, consists of movements in and out of school that cover a long period of time. But again, in all cases, students change schools as well as change enrollment status over this - six-year period.

These data also support the conclusions from the previous section: mobile students are less likely to finish high school. Of the 10 highly mobile students profiled in Figure 4.4, not one finished high school. Nine quit school before completing and one was still enrolled at the end of 12th grade but did not have enough credits to graduate. He may eventually do so, but probably by earning a high-school equivalency (GED) rather than a regular high-school diploma. The other two mobile CULS students we examined in Chapter 2, José and Eduardo, also did not finish high school.

Figure 4.4 Secondary Enrollment Patterns for 10 Urban Latino Students



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To investigate the relationship between school stability and enrollment stability further, we compared school mobility rates for two types of students: students who, during the course of the NELS study, were identified at some point as a school dropout, and those who were never identified as dropouts.[14] The results are shown in Table 4.3.

Table 4.3 Number of Non-promotional School Changes by Dropout Status for Latinos and Non-Latino Whites (percentage distribution)

Number of school changes	Latinos		Non-Latino Whites	
	Never Dropped Out	Ever Dropped Out	Never Dropped Out	Ever Dropped Out
0	74	38	78	22
1	17	42	18	22
2	6	9	3	28
3 or more	4	11	2	28
Total	100	100	100	100
(Proportion in the population)	(71)	(29)	(84)	(16)

NOTE: School mobility represents school changes excluding those due to promotion from elementary to middle school and from middle school to high school.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

As the figures show, students who dropped out between grades 8 and 12 were more likely to have changed schools than students who never dropped out during that period. For Latinos, about 66 percent of all dropouts changed schools at least once between grades 8 and 12, while for non-Latino whites, more than 75 percent changed schools at least once between grades 8 and 12. In fact, for non-Latino whites, more than 25 percent of all dropouts changed schools three or more times (in no more than a - four-year period, since some dropouts may have left school permanently before the 12th grade). In contrast, more than 40 percent of all Latino dropouts only change schools one time.

The preceding analysis shows that school stability and enrollment stability are clearly related. Students who quit school—change enrollment status—are also more likely to change schools. The data suggest that most dropouts don't simply quit one secondary school, but try at least one other school. Non-Latino white students are more likely than Latino students to try several schools. Students who change schools are also more likely to interrupt their schooling by quitting or dropping out of school at least for some amount of time.

14 There were four times during the NELS study when respondents were identified as dropouts: during the first follow-up in spring 1990, during the second follow-up in spring 1992, and during the two periods when researchers visited the respondents' schools to verify their enrollment status, during fall 1989 and fall 1991. Thus the NELS study probably undercounts the total number of 8th graders who ever dropped out of school. Another study using a more lenient measure of school dropout (three months of nonattendance) found that 37 percent of a cohort of young men had dropped out some time during high school (Klerman and Karoly, 1994).

SUMMARY

In this chapter we investigated the relationship between school mobility and school completion. We found that even one school change between grades 8 and 12 greatly reduced the likelihood that students earned a high-school diploma—and the impacts were even greater on non-Latino whites than Latinos. We also found that school stability was closely related to enrollment stability. Students who changed schools were also more likely to quit school, even temporarily, than students who remained enrolled in the same high school.

Chapter 5

SUMMARY AND POLICY CONSIDERATIONS

Although student mobility is widespread in the United States, it has not been widely studied. Using longitudinal data on a sample of California 8th-grade Latino students and extensive data collected on a small sample of low-income urban Latino students, we examined the incidence, causes, and consequences of student mobility, focusing primarily on mobility during high school.

Our analysis confirmed that mobility is widespread. More than half of all students made at least one non-promotional school change over their educational careers between grades 1 and 12. School changes were more common during elementary and middle school than during high school. Only one-quarter of the students changed schools between grades 8 and 12 for non-promotional reasons. Students in California were more mobile than students in other states. Yet among California students, Latino students were actually more stable than non-Latino white students. Our analysis of urban Latino mobility revealed that most school changes during secondary school were made to other regular and nontraditional schools within the same school district. This pattern was also documented by another study of elementary students in Chicago.

Students change schools for many reasons. One reason is that their families change residence. Nationally, about 70 percent of all students who reported changing schools between grades 8 and 12 also reported that their families moved. Yet among parents who reported that their child changed schools over this period, only 50 percent reported that the change was due to moving. Consequently, up to half of all school changes during this period appear to be for school-related reasons. More Latinos than non-Latino whites changed schools for school-related reasons.

Other factors besides changing residences also predicted whether students changed high schools. Among Latinos, students from high-socioeconomic status families were less likely to change schools than students from low-socioeconomic status families. Second-generation Latino students were less likely to change schools than third-generation Latino students. School-related factors also influenced the decision to change high schools, especially among Latinos. Latino students with higher rates of misbehavior, those not involved in school activities, and those with lower test scores and grades were more likely to change schools than other students. These findings support the conceptual framework posited for this study—that both academic and social problems contribute to student mobility, at least among Latino students.

Our analysis revealed that student mobility adversely affects students' chances of graduating from high school, even after controlling for the effects of these other factors. Students with even one school change during high school were much less likely to earn a high-school diploma than students who did not change high schools, even after controlling for family socioeconomic status and other factors that predict high-school completion.

Finally, our analyses supported our initial conceptual framework that shows school stability (mobility) and enrollment stability (dropping out) are highly interrelated. Students who changed schools often quit school temporarily as well. As such, school mobility should be considered as part of a process of student withdrawal that is part of the process of dropping out.

IMPLICATIONS

Our findings—that student mobility is widespread and adversely affects students' chances of completing high school—have important implications for all educational stakeholders: state policy makers, local school officials (district administrators, principals, and teachers), and students and

parents. Each of these stakeholders is affected by student mobility, and each can play a role in responding to it.

Responses can serve two purposes. One is to reduce the incidence of at least some types of mobility—mobility that is unnecessary and not educationally productive. The other is to mitigate potentially harmful impacts. Appropriate responses to mobility depend on the type of, or reason behind, mobility. In order to formulate appropriate policy responses it is important to distinguish between three types of mobility:

1. Family-related
2. School-related, voluntary
3. School-related, involuntary

Family-related mobility is related to family issues, such as changing residences—families moving from one area of the country to another, perhaps to find a better job. In this case, changing residences requires changing schools. This kind of mobility is not preventable. The appropriate response is to better prepare for and respond to the change, to smooth the transition to a new school. Schools might, for example, provide an orientation program for new, incoming students by matching them with other students who can show them around, provide academic as well as social support.

School-related mobility, on the other hand, is more preventable than family-related mobility. The majority of Latino parents who reported that their adolescents changed high schools said that their adolescents requested the change. These were voluntary school changes initiated by students. Moreover, based on our study of urban Latinos, it appears that the majority of these changes were not for academic reasons, because they usually involved changing to another comprehensive high school rather than changing to a magnet or other specialized high school. These types of school changes are preventable—that is, if schools were more responsive to students and parents, this type of mobility could be reduced or prevented. Appropriate responses to prevent school moves might include increasing student engagement—both socially and academically—to reduce this type of mobility, and responses to lessen negative impacts, as mentioned above.

In addition to voluntary school changes, more than a third of Latino parents also reported that the school initiated the change because of academic or discipline problems. These school changes were basically involuntary. In order to promote school safety, California schools have been given increased latitude to expel or transfer difficult or misbehaving students. Several case studies have also documented a school practice of coercing difficult students to leave voluntarily (Fine, 1991; Bowditch, 1993). School changes for disciplinary reasons are problematic, because they are being used for Latino students more than for non-Latino white students, which raises questions about the evenhandedness of such practices. Involuntary school changes might require a different response, such as investigating schools with high rates of mobility to see whether these schools are discharging large numbers of students rather than accommodating student needs.

POLICY CONSIDERATIONS

To prevent some kinds of student mobility and to mitigate the potentially harmful effects of all mobility, educational stakeholders could initiate a variety of appropriate responses. In this report, we identify possible responses, that could be initiated by state policy makers. We call these "Policy Considerations" because we have not analyzed the costs or political feasibility of implementing them. After considering these constraints, however, we believe that useful and effective responses could be undertaken by appropriate state officials through legislation or through Department of Education mandates and directives. To provide information on the extent of student mobility in California and

to begin to address what we see as a serious yet unrecognized educational problem, we believe state policy makers should consider:

1. **Requiring schools to report mobility rates to the Department of Education. For example, schools could be required to report the proportion of students who leave a school (say a minimum of 15 days) before the end of the year, as well as the proportion of new students who enter after the start of the year.**

One reason so little is known about student mobility in California is that the state does not collect relevant data. Schools could easily provide counts of students who leave school before completing the year, because they routinely collect and report related information through the California Basic Education Data System (CBEDS). Since schools must now report dropouts, they could also report students who transfer.

2. **Including attrition rates as a measure of school effectiveness in school accountability reports.**

The Department of Education periodically issues school accountability report cards, which are designed to measure the effectiveness of schools. School mobility rates should be included as a measure of school effectiveness because they reflect, in part, the "holding power" of schools—their ability to retain and educate students who walk in the door. As with all measures of school effectiveness, a school's demographic characteristics, which can contribute to school mobility rates, should be taken into account.

3. **Holding school districts accountable to monitor the whereabouts of students who leave a school early, particularly students who say they are transferring to another school within the district, to ensure that students actually enroll in another school in a timely manner.**

Student mobility is a problem, in part, because students who change schools are not monitored between leaving one school and entering another, even within the same district. Currently, no one is accountable for these students during this transition. Our data show that several weeks often elapse before secondary students re-enroll: This must change to avoid an unnecessary interruption in a student's schooling. Because school districts are legally responsible for the educational welfare of their students, and because most transfers occur within districts, school districts should be accountable to the state for minimizing the transition time.

4. **Requiring school districts to transmit student records to the new school in a timely manner.**

One frequent problem is that student records are not promptly delivered to the new school. Without these records, personnel at the new school cannot know a student's educational history and what services he or she may need. Data on urban Latino students show that 80 percent of non-promotional school changes are within the same district, so record transfers should be easily done.

5. **Having the state Department of Education prepare a guidebook for students and parents that describes the advantages and disadvantages of changing schools, and provides information on how to prepare for the move and ease the transition into a new school.**

Some mobility could be prevented if students and parents were better informed about the risks and rewards of changing schools. Latino parents particularly need information about the risks for their child in requesting a school change, because Latino students request such changes more often than non-Latino white students. Transitions to new schools could be improved if students and parents knew how to facilitate the move.

6. **Having the Department of Education prepare a guidebook for school districts with actions they can take to reduce unnecessary transfers and to respond to the particular needs of transfer students.**

Some schools actively encourage student transfers without considering the educational consequences. Schools may also do little to help integrate transfer students and improve their prospects for academic success. But some schools, both in California and elsewhere in the United States, have established interventions for transfer students including orientation and "buddy" programs to help them adjust more quickly and successfully to their new schools. The Department of Education could evaluate the effectiveness of these programs and provide information about them throughout the state.

7. **Providing funds to schools to establish programs to improve the academic and social integration of new students in a school.**

The Department of Education could also provide grants to schools to develop, implement, and evaluate "newcomer" programs in middle and high schools.

Appendix Table A.1
Number and (Percent Distribution) of NELS California Subsample with California State Enrollment Data

Ethnicity	National Educational Longitudinal Study of 1988					CBEDS
	U.S.	Other States	California			California
			Total	Private	Public	Public
I. UNWEIGHTED						
Asian/Pacific Islander	803	562	241	30	201	
	(7)	(5)	(22)	(16)	(22)	
Hispanic	1,389	1,043	346	41	287	
	(12)	(10)	(31)	(22)	(33)	
Black not Hispanic	1,149	1,097	52	7	38	
	(10)	(11)	(5)	(4)	(4)	
White not Hispanic	8,029	7,586	443	111	321	
	(70)	(73)	(40)	(59)	(37)	
Native American	127	108	19	0	17	
	(1)	(1)	(2)	(0)	(2)	
Total	**11,609**	**10,495**	**1,114**	**189**	**864**	
II. WEIGHTED						
Asian/Pacific Islander	91,212	63,476	27,736	5,165	21,538	32,265
	(3)	(3)	(13)	(15)	(13)	(10)
Hispanic	250,550	191,640	58,910	9,022	45,350	93,003
	(10)	(8)	(27)	(27)	(29)	(30)
Black not Hispanic	328,260	311,049	17,212	1,678	11,961	28,448
	(13)	(14)	(8)	(5)	(8)	(9)
White not Hispanic	1,914,866	1,803,679	111,188	17,810	90,193	155,336
	(72)	(74)	(51)	(51)	(52)	(50)
Native American	31,012	27,397	3,615	0	3,315	2,610
	(1)	(1)	(2)	(0)	(2)	(1)
Total	**2,645,374**	**2,423,021**	**222,353**	**33,675**	**172,357**	**311,579**

SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey and the California Basic Educational System (CBEDS) for 1987-88 school year.
NOTE: Totals include students whose ethnicity or school control (public/private) was missing. Percentages are based on non-missing cases.

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Appendix Table A.2
Ninety Percent Confidence Intervals for Latinos and Non-Latino Whites by California Residency: 1988 8th Graders
(percentage distribution)

	California			Other States			Total
p(1-p)	Latinos	Non-Latino Whites	All Students	Latinos	Non-Latino Whites	All Students	
.05(.95)	± 3	± 3	± 2	± 2	± 1	± 1	± 1
.10(.90)	± 4	± 4	± 3	± 2	± 1	± 1	± 1
.20(.80)	± 6	± 5	± 4	± 3	± 1	± 1	± 1
.30(.70)	± 7	± 6	± 4	± 4	± 2	± 1	± 1
.40(.60)	± 7	± 7	± 4	± 4	± 2	± 1	± 1
.50(.50)	± 7	± 7	± 5	± 4	± 2	± 1	± 1
DEFT	1.627	1.743	1.858	1.627	1.743	1.858	1.858
N	346	443	1,114	1,043	7,586	10,495	11,609

NOTE: The ninety percent confidence intervals were computed using the following formula: DEFT x $(p(1\text{-}p)/n)^{1/2}$x1.645. DEFT is the design effect, $(p(1\text{-}p)/n)^{1/2}$.is the formula for standard errors, and ± 1.645 is the factor for the ninety percent confidence interval of a normal distribution. Tabulations exclude respondents with missing mobility data, which represents approximately 11 percent of the sample.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

Appendix Table A.3
Descriptions of Variables

Variable	Type*	Description (NCES variable names)
Student Background Characteristics		
Female	D	(SEX = 1)
Immigrant	D	Born outside the U.S. (BYP17 = 1)
Second generation	D	Born in U.S., either parent born outside U.S. (BYP17≠1 and BYP14 = 2 or 3 or BYP17 = 2 or 3)
Held back before the 8th grade	D	(BYS74 or BYP44 = yes)
Number of school changes grades 1-8	C	Number of times changed schools since the first grade (BYP40)
Family Background Characteristics		
Socioeconomic status	FC	NCES composite (BYSES)
Single parent family	D	NCES composite (BYFCOMP = 4 or 5)
Step family	D	NCES composite (BYFCOMP = 2 or 3)
Schooling Experiences in 8th Grade		
Urban school	D	Urban school (G8URBAN = 1)
Private school	D	Private school (G8CNTRL = 2, 3, or 4)
Low expectations	D	High school or less (BYS45 = 1 or 2)
Teacher quality	FC	Student reports of how much they agree (1 = strongly agree, 4 = strongly disagree) that the teaching is good (BYS59F), teachers are interested in students (BYS59G), teachers praise their efforts (BYS59H), teachers 'put them down', most teachers listen to what they say (BYS58J). Factor has an eigenvalue of 2.72 and explains 54 percent of the combined variance.
Absent 15-25 percent	D	Student missed 3 or 4 days of school over the last 4 weeks (BYS75).
Absent 25 percent or more	D	Student missed 5 days of school or more over last 4 weeks (BYS75).
Misbehaved	FC	Misbehavior, constructed from student reports of how often during first semester (0 = never, 2 = more than twice) student was send to the office for misbehaving (BYS55A), student was sent to office because of problems with school work (BYS55B), and parents received warning about their behavior (BYS55E). Factor has an eigenvalue of 2.06 and explains 69 percent of combined variance.

Appendix Table A.3 (continued)
Descriptions of Variables

Variable	Type*	Description (NCES variable names)
Academically engaged	FC	Student academic engagement constructed from student reports of how often (1 = usually, 4 = never) they come to class without pencil or paper (BYS78A), books (BYS78B), or their homework done (BYS78C). Factor has an eigenvalue of 1.88 and explains 63 percent of the combined variance.
No school activities	D	Student did not participate in any school activities during current school year (BYS82A-U).
Average GPA	C	Average of self-report grades from 6th grade until now in English, math, science, and social studies, constructed by NCES (BYGRADS)
Test scores	C	Standardized test composite in reading and math, divided by ten (BYTXCOMP)
Educational Stability, 1988-92		
Changed residences	D	Moved between 1988 and 1992 (F2S102 = 2,3,4)
Changed schools once	D	Changed schools once between 1988 and 1992 (F2S103 = 2)
Changed schools more than once	D	Changed schools two or more times between 1988 and 1992 (F2S103 = 3 or 4)
Dropped out	D	Identified as a dropout at least once during survey period (EVDOSTAT)

*Variables type is: dummy (D), continuous (C), or factor composite (FC).

Appendix Table A.4
Mean Characteristics of Latinos and Non-Latino Whites: 1988 California 8th Graders

	Latinos		Non-Latino Whites	
	Mean	Standard Error	Mean	Standard Error
Student Background Characteristics				
Female	.57	.03	.48	.02
Immigrant	.22	.03	.02	.01
Second generation	.41	.03	.10	.01
Held back before the 8th grade	.15	.02	.15	.02
Number of school changes grades 1-8	.97	.08	1.50	.07
Family Background Characteristics				
Socioeconomic status	-.76	.06	.49	.04
Single parent family	.15	.02	.15	.02
Step family	.13	.02	.19	.02
Schooling Experiences in 8th Grade				
Attended urban school	.35	.03	.16	.02
Attended private school	.15	.02	.18	.02
Low expectations	.13	.02	.11	.01
Teacher quality	-.05	.06	.02	.05
Absent 15-25 percent	.14	.02	.12	.01
Absent 25 percent or more	.10	.02	.10	.01
Misbehaved	.06	.06	-.09	.04
Academically engaged	.06	.06	.03	.04
No school activities	.49	.03	.22	.02
Average GPA	2.61	.04	3.00	.04
Test scores (/10)	4.63	.06	5.36	.04
Educational Stability, 1988-92				
Changed residences	.36	.03	.39	.02
Changed schools once	.24	.03	.18	.02
Changed schools more than once	.12	.02	.13	.02
Dropped out	.29	.03	.16	.02

NOTE: Values based on F3 panel and weighted with weight variable F3PNLWT.
SOURCE: Tabulations from the National Education Longitudinal Survey of 1988 based on 8th-grade panel from the 1994 third follow-up survey.

Appendix Table A.5
Predicted Odds Ratios of Changing Schools Between 1988 and 1992: 1988 California 8th Graders

	Latinos			Non-Latino Whites		
	Univariate	Multivariate		Univariate	Multivariate	
	(1)	(2)	(3)	(4)	(5)	(6)
Student and Family Characteristics						
Female	1.32	1.22	1.59	1.07	0.88	0.97
First generation	0.84	0.46	0.68	0.52	0.23	0.24
Second generation	0.66	0.52*	0.69	0.55	0.72	0.59
Socioeconomic status	0.75*	0.69*	0.81	0.85	0.96	1.23
Single parent family	1.35	1.13	0.95	1.49	0.90	0.71
Step family	1.67	1.19	1.18	1.94*	1.03	1.01
Number of school changes grades 1-8	1.24**	1.24*	1.26*	1.35**	1.21*	1.18
Moved, 1988-92	2.64**	2.14**	2.42**	5.83**	5.22**	5.46**
Schooling Experiences in 8th Grade						
Held back before 1988	1.97*		1.49	1.52		0.95
Attended urban school	1.92*		1.58	0.91		1.01
Attended private school	0.79		1.48	0.62		0.86
Low expectations	2.20*		1.15	2.62*		1.52
Teacher quality	1.26		1.11	1.25		0.98
Absent 15-25 percent	1.54		1.40	1.75		1.87
Absent 25 percent or more	0.91		0.42	1.30		1.10
Misbehaved	1.58**		1.57**	1.32*		1.11
Academically engaged	0.90		1.13	0.67**		0.79
No school activities	1.70*		1.47	1.10		0.99
Average GPA	0.47**		0.60*	0.66**		0.96
Test scores	0.73*		1.04	0.68**		0.71*
-2 Log Likelihood		394.667	359.276		423.410	404.04
Pseudo R^2		7.1	15.4		14.0	17.9

*Significant at .05 level **Significant at .01 level.

NOTE: Coefficients represent the estimated effects on the odds ratios [exp(β)], which is the ratio of the odds due to a one-unit change in the independent variable to the odds without the change of changing schools versus not changing schools.

Appendix Table A.6
Predicted Odds Ratios of Completing High School Diploma or GED by 1994: 1988 California Latino 8th-Grade Cohort

	Completed High School Diploma			Completed GED		
	(1)	(2)	(3)	(4)	(5)	(6)
Student and Family Characteristics						
Female	0.71	0.78	1.01	0.99	1.22	1.67
First generation	3.64**	3.63*	3.66*	1.81	1.93	2.09
Second generation	2.91**	3.01*	2.56*	0.72	0.84	0.76
Socioeconomic status	4.05**	2.69**	2.63**	2.11	1.44	1.48
Single parent family	1.23	1.68	1.79	2.33	2.93	3.00
Step family	0.41	0.47	0.67	0.17	0.15	0.13
Held back before 1988	0.47	0.48	0.39*	1.11	1.18	1.03
Number of school changes grades 1-8	0.86	0.89	0.99	1.10	1.20	1.30
Schooling Experiences in 8th Grade						
Attended urban school		1.25	1.52		0.98	1.01
Attended private school		16.00	16.80		--	--
Low expectations		0.51	0.53		0.70	0.66
Teacher quality		0.81	0.83		0.99	1.02
Absent 15-25 percent		0.90	1.05		1.37	1.25
Absent 25 percent or more		1.06	0.93		0.55	0.52
Misbehaved		1.06	1.14		1.48	1.51
Academically engaged		1.21	1.24		2.32	2.57*
No school activities		0.85	0.93		0.24	0.20*
Average GPA		1.83*	1.65		0.67	0.67
Test scores		1.60	1.75*		1.96	1.97
Student mobility, 1988-92						
Moved			0.69			0.52
Changed schools once			0.27**			1.12
Changed schools more than once			0.30**			1.57
-2 Log Likelihood	-177.10	-150.58	-142.90	-177.10	-150.58	-142.90
Pseudo R^2	0.05	0.31	0.34	0.05	0.31	0.34

*Significant at .05 level. **Significant at .01 level.

NOTE: Coefficients represent the estimated effects on the odds ratios [exp(β)] of completing a high-school diploma or a GED versus not finishing high school, which is the ratio of the odds due to a one-unit change in the independent variable to the odds without the change.

Appendix Table A.7
Predicted Odds Ratios of Completing High School Diploma or GED by 1994: 1988 California Non-Latino White 8th-Grade Cohort

	Completed High School Diploma			Completed GED		
	(1)	(2)	(3)	(4)	(5)	(6)
Student and Family Characteristics						
Female	3.04*	9.38*	29.08**	0.59	1.46	2.70
First generation	0.70	0.51	0.16	--	--	--
Second generation	11.78	6.31	2.33	--	--	--
Socioeconomic status	4.27**	9.54**	19.54**	3.05	6.17*	11.73*
Single parent family	0.75	1.99	0.80	1.58	4.32	2.34
Step family	5.12**	3.33	2.80	10.21**	5.54	3.07
Held back before 1988	0.05**	0.05**	0.02**	0.01	0.01	0.01**
Number of school changes grades 1-8	0.47**	0.33**	0.30**	0.74	0.55	0.49
Schooling Experiences in 8th Grade						
Attended urban school		1.00	0.85		0.33	0.42
Attended private school		0.41	0.01*		0.04	0.01*
Low expectations		0.09*	0.06*		0.16	0.10
Teacher quality		1.86	3.52*		1.21	1.84
Absent 15-25 percent		0.21	0.42		0.24	0.39
Absent 25 percent or more		0.08*	0.05		0.07	0.06
Misbehaved		0.64	0.77		0.51	0.49
Academically engaged		1.55	1.68		1.84	2.19
No school activities		0.09**	0.04**		0.09*	0.04*
Average GPA		3.06	7.81**		2.48	3.96
Test scores		1.24	0.98		1.47	1.49
Student mobility, 1988-92						
Moved			0.68			0.60
Changed schools once			0.04**			0.31
Changed schools more than once			0.03**			0.34
-2 Log Likelihood	-111.74	-78.77	-67.32	-111.74	-78.77	-67.32
Pseudo R^2	0.38	0.56	0.63	0.38	0.56	0.63

*Significant at .05 level. **Significant at .01 level.

NOTE: Coefficients represent the estimated effects on the odds ratios [exp(β)] of completing a high-school diploma or a GED versus not finishing high school, which is the ratio of the odds due to a one-unit change in the independent variable to the odds without the change.

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